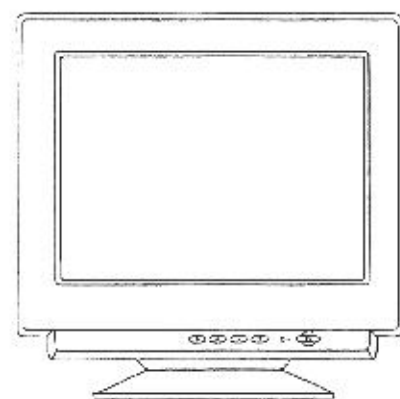


# Service Manual

MODEL V773-1M / -1E V773-6M / -6E  
(M-1734QU-M / -E M-1734QU-NM / NE)

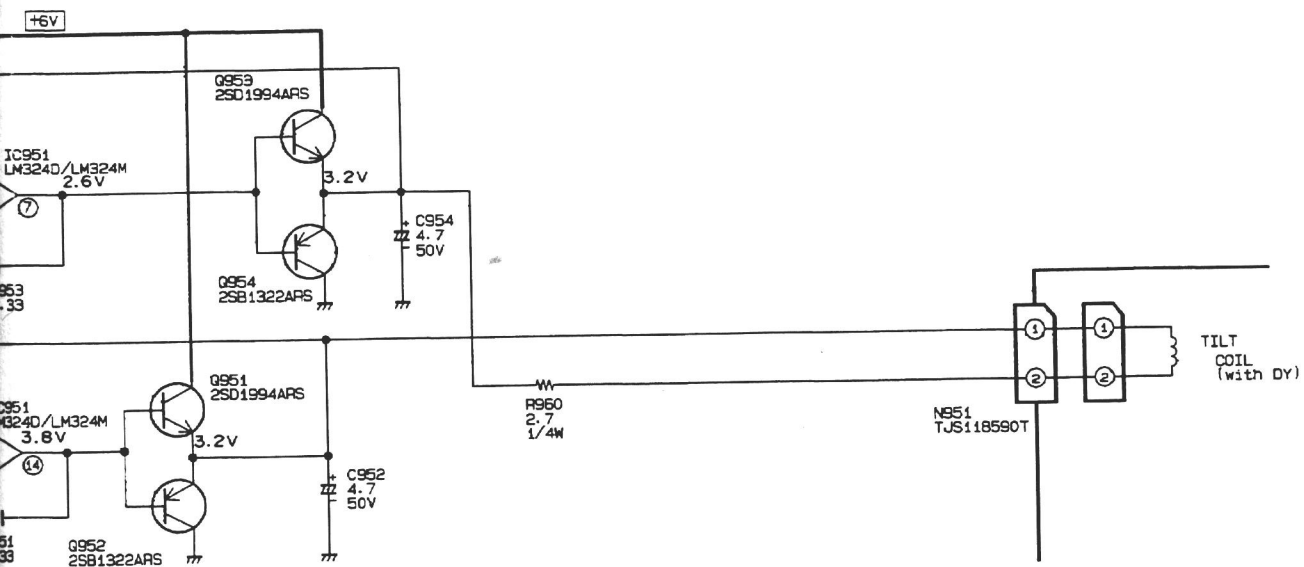
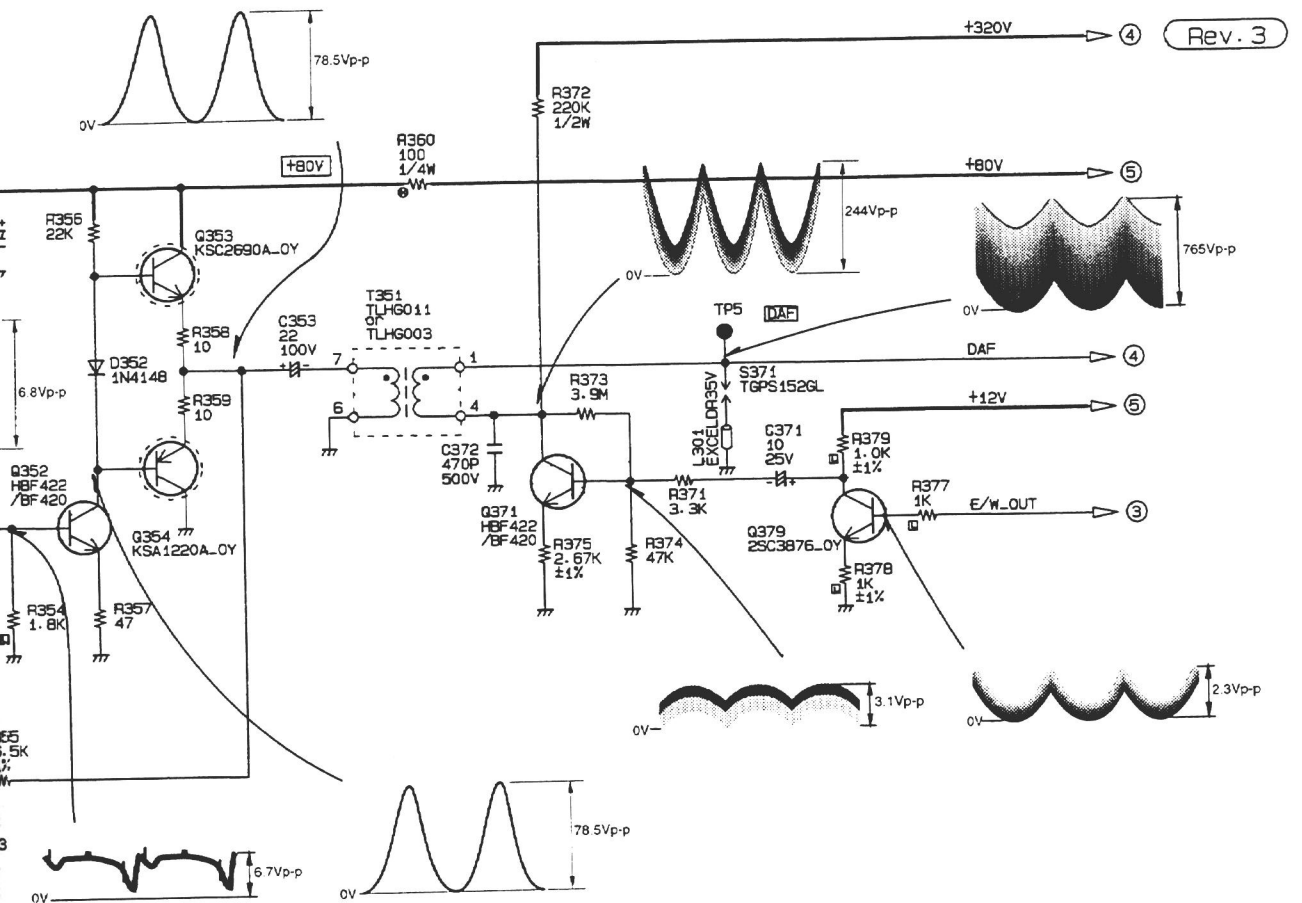
Please file and use this manual together  
with the service manual for Model 1769GS-2.  
Order No. FTD960305329



## CONTENTS

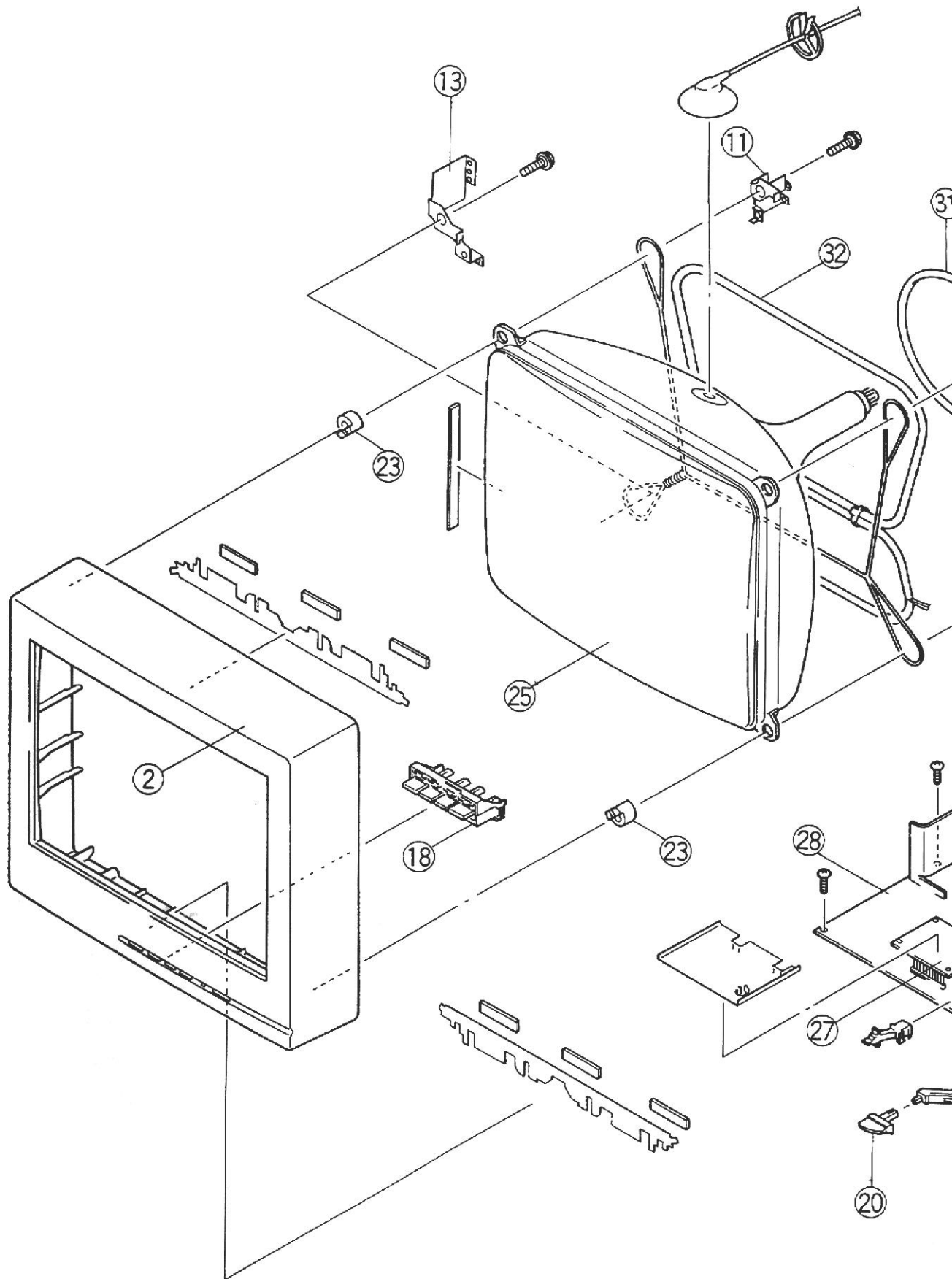
|                                                            |    |
|------------------------------------------------------------|----|
| SERVICE WARNING .....                                      | 1  |
| SAFETY PRECAUTIONS.....                                    | 2  |
| GENERAL INFORMATION .....                                  | 3  |
| SPECIFICATIONS.....                                        | 3  |
| DIMENSIONS.....                                            | 11 |
| REQUIRED ADJUSTMENT PROCEDURE AFTER A PARTS REPLACED ..... | 13 |
| ADJUSTMENT PROCEDURE .....                                 | 14 |
| SCHEMATIC DIAGRAM.....                                     | 20 |
| EXPLODED VIEW.....                                         | 28 |
| REPLACEMENT PARTS LIST .....                               | 29 |

# ViewSonic

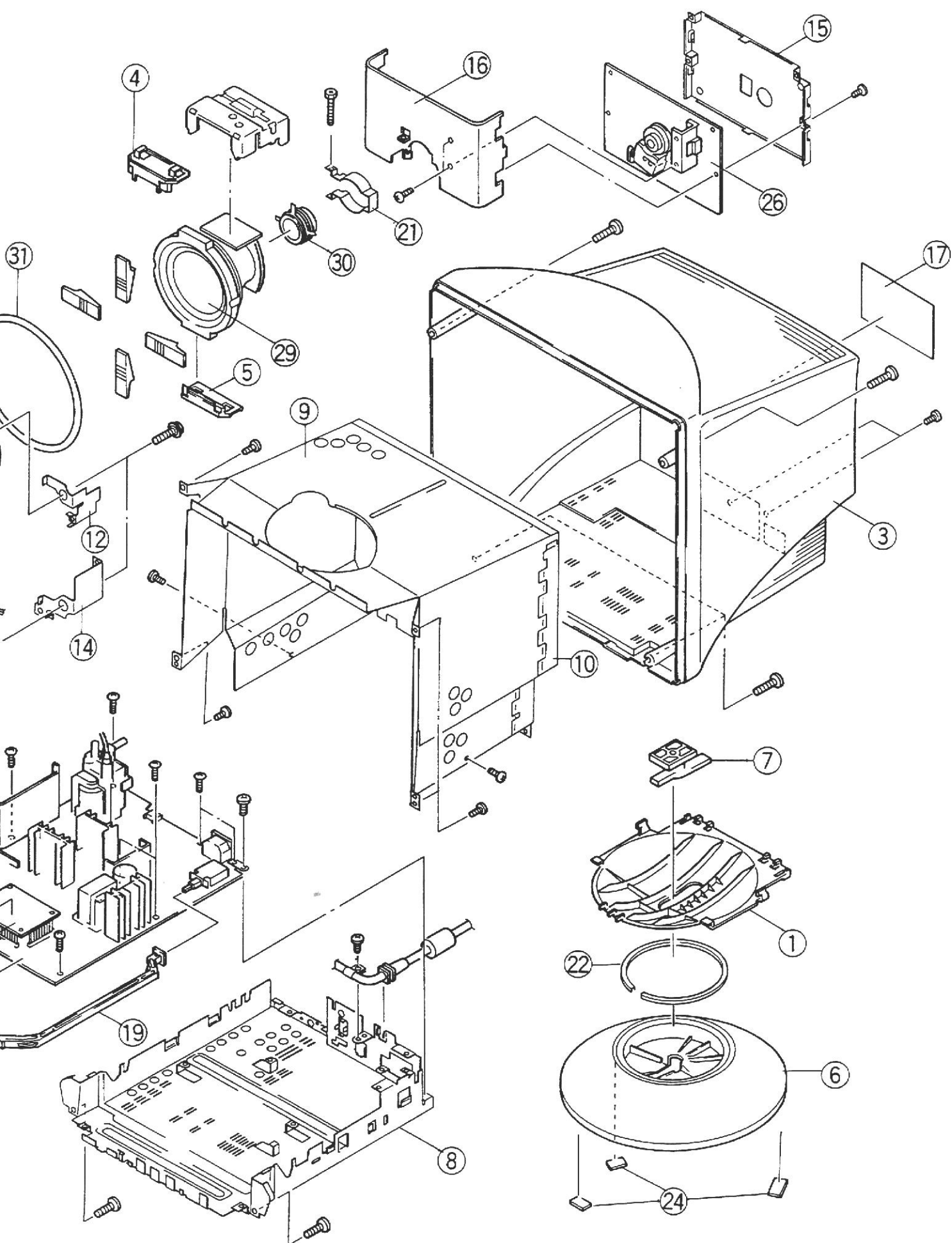


TNP0039





# EXPLODED VIEW



# REPLACEMENT PARTS LIST

## Important: Safety Notice

Components identified by the International symbol  have special characteristics important for safety. When replacing any of these components use only manufacture's specified parts.

### RESISTOR

| PART NAME & DESCRIPTION |             |           |       |
|-------------------------|-------------|-----------|-------|
| TYPE                    |             | ALLOWANCE |       |
| C                       | Carbon      | F         | ± 1%  |
| F                       | Fuse        | J         | ± 5%  |
| M                       | Metal Oxide | K         | ± 10% |
| S                       | Solid       | M         | ± 20% |
| W                       | Wire Wound  | G         | ± 2%  |

Part No. Description  
Example ERD25TJ104  100K  1/4W

### CAPACITOR

| PART NAME & DESCRIPTION |               |           |            |
|-------------------------|---------------|-----------|------------|
| TYPE                    |               | ALLOWANCE |            |
| C                       | Ceramic       | C         | ± 0.25pF   |
| E                       | Electrolytic  | D         | ± 0.5pF    |
| P                       | Polyester     | F         | ± 1pF      |
| S                       | Styrol        | J         | ± 5%       |
| T                       | Tantalum      | K         | ± 10%      |
| PP                      | Polypropylene | L         | ± 15%      |
|                         |               | M         | ± 20%      |
|                         |               | P         | +100% - 0% |
|                         |               | Z         | +80% - 20% |

Part No. Description  
Example ECKF1H103ZF  0.01µF  50V

| Ref.No.                                                                            | Part No.             | Description                     | Ref.No.                                                                             | Part No.     | Description                             |
|------------------------------------------------------------------------------------|----------------------|---------------------------------|-------------------------------------------------------------------------------------|--------------|-----------------------------------------|
|                                                                                    | CABINET & MAIN PARTS |                                 |                                                                                     |              |                                         |
|  | 1                    | TKYAO1201A BOTTOM CABINET       | 24                                                                                  | TMK84990     | SET LEG                                 |
|  | 2                    | TKEAO1031 ESCUTCHEON<-NM>       |                                                                                     | TMK85572     | FERRITE STICK                           |
|  | 2                    | TTEAO1031-1 ESCUTCHEON<-M,-E>   |                                                                                     | THECO019     | SCREW(FOR CRT PCB HOLDER)               |
|  |                      | TKUCO2102 REAR COVER            |                                                                                     | THT1027      | SCREW(FOR CRT)                          |
|  | 3                    | TKKC5019 LED GUIDE              |                                                                                     | THT1069      | SCREW(FOR SHIELD CASE)                  |
|  |                      | TKKL5008 BLIND COVER            |                                                                                     | XTN5-16A     | SCREW                                   |
|  | 6                    | TKK859979-4 PEDESTAL            |                                                                                     | XTN5-25A     | SCREW                                   |
|  | 7                    | TKK859980 CENTER POST           |                                                                                     | XTV3-8J      | SCREW                                   |
|                                                                                    | 8                    | TUAAO2801-4 BOTTOM PLATE        |                                                                                     | XYA4-EF8     | SCREW                                   |
|                                                                                    | 9                    | TUCC5071-2 SHIELD CASE          |                                                                                     | XYE3-EJ10    | SCREW                                   |
|                                                                                    | 10                   | TUCC5072 SHIELD CASE(REAR)      |                                                                                     |              |                                         |
|                                                                                    | 11                   | TUCC5167 EARTH METAL(R-UPPER)   | 26                                                                                  | TNPA0182-22  | PC BOARD W/COMPONENT(CRT)               |
|                                                                                    | 12                   | TUCC5168 EARTH METAL(L-UPPER)   | 27                                                                                  | TNPA0287-23  | PC BOARD W/COMPONENT (MICRO COMPUTER)   |
|                                                                                    | 13                   | TUCX5001 EARTH METAL(R-UNDER)   |                                                                                     |              |                                         |
|                                                                                    | 14                   | TUCX5002 EARTH METAL(L-UNDER)   |  | 28           | TNPH0039-27 PC BOARD W/COMPONENT (MAIN) |
|                                                                                    | 15                   | TUSA007 SHIELD CASE(CRT PCB)    |                                                                                     |              |                                         |
|  | 16                   | TUSD003-1 SHIELD PLATE(CRT PCB) |  | 32           | TSPA022 DEGAUSS COIL                    |
|  | 17                   | TBMC720 MODEL NAME PLATE<-M,-E> |  |              |                                         |
|  | 17                   | TBMC721 MODEL NAME PLATE<-NM>   |                                                                                     | TSXA014      | POWER CORD<-E>                          |
|                                                                                    | 19                   | TBXAO2104 POWER SWITCH SHAFT    |                                                                                     | TSXA051      | POWER CORD<-M,-NM>                      |
|  |                      |                                 |                                                                                     | TSXF056      | SIGNAL CORD                             |
|  |                      |                                 |                                                                                     | TXA3A2D1734M | CRT EARTH LEAD                          |
|  |                      |                                 |  | TSB8909-0    | FERRITE CORE                            |
|                                                                                    | 20                   | TBXAO4501 KNOB(CONTROL)         |                                                                                     | XBA215T4.0AH | FUSE(4.0A)                              |
|                                                                                    | 21                   | TESA015 CRT PCB HOLDER          |                                                                                     | T4F31519Q    | POLYESTER TAPE(50M)                     |
|                                                                                    |                      | TESH011 SPRING(HEAT SINK)       |                                                                                     | TPCA39801A   | OUTER CARTON<-M,-E>                     |
|                                                                                    |                      | TES9148-4 SPRING(CRT EARTH)     |                                                                                     | TPCA39901    | OUTER CARTON<-NM>                       |
|                                                                                    | 22                   | TMM15404-1 SPACER RING          |                                                                                     | TXAPD2D1734T | FILLER(TOP)                             |
|                                                                                    |                      | TMM16452 LEAD CLAMPER(LONG)     |                                                                                     | TXAPD2M1734B | FILLER(BOTTOM)                          |
|                                                                                    |                      | TMM17434-1 LEAD CLAMPER(SHORT)  |                                                                                     | TPE814109-2  | SET COVER                               |
|                                                                                    |                      | TMM6463 CLAMPER(MIDDLE)         |                                                                                     | TQE8513-2    | FUN BAG COVER                           |
|                                                                                    |                      | TMM7468 CLAMPER                 |                                                                                     | TQBE0119     | INSTRUCTION BOOK<-M,-E>                 |
|  | 23                   | TMM85576-1 CRT RUBBER           |  |              |                                         |
|  |                      | TMKE031 BARRIER                 |                                                                                     | TQBE0118     | INSTRUCTION BOOK<-NM>                   |
|  |                      | TMKG032 CRT RUBBER              |                                                                                     | TQDE14012    | REGISTRATION CARD<-M>                   |
|                                                                                    |                      | TMKG074 CUSHION                 |                                                                                     | TQFA322      | PTB LABEL(INNER)                        |
|                                                                                    |                      |                                 |                                                                                     | TQFA343      | BAR CODE LABEL                          |
|                                                                                    |                      |                                 |                                                                                     | TQF80720     | NHW LABEL                               |
|                                                                                    |                      |                                 |                                                                                     | TQF82880     | HIGH VOLTAGE LABEL                      |
|                                                                                    |                      |                                 |                                                                                     | TQF83825-6   | SERIAL NO. LABEL                        |

| Ref.No. | Part No.     | Description         | Ref.No. | Part No.    | Description |
|---------|--------------|---------------------|---------|-------------|-------------|
| △       | TQF85363-1   | CARTON LABEL<-M>    | Q595    | UN5211AI    | TRANSISTOR  |
|         | TQF85363-8   | CARTON LABEL<-E>    | Q596    | UN5211AI    | TRANSISTOR  |
|         | TQF86608     | EARTH CAUTION LABEL | Q597    | 2SB792R     | TRANSISTOR  |
|         | I.C          |                     | Q598    | 2SD1273APLB | TRANSISTOR  |
|         |              |                     | Q671    | UN5211AI    | TRANSISTOR  |
| IC101   | TV5A004B     | IC                  | Q672    | UN5211AI    | TRANSISTOR  |
| IC102   | 24LC08BTISN  | IC                  | Q673    | KTC3265-OY  | TRANSISTOR  |
| IC103   | MB88346BPFTF | IC                  | Q674    | KTA1298-OY  | TRANSISTOR  |
| IC104   | MB88346BPFTF | IC                  | Q675    | 2SK1917FS1  | TRANSISTOR  |
| IC121   | 24LC21TISN   | IC                  | Q771    | 2SD602R     | TRANSISTOR  |
| IC270   | LM2931CMX    | IC                  | Q821    | 2SK214B     | TRANSISTOR  |
| IC271   | MM74HC00MX   | IC                  | Q822    | 2SC4620V25  | TRANSISTOR  |
| IC280   | M52346SP     | IC                  | Q823    | UN5211AI    | TRANSISTOR  |
| IC301   | LF347MX      | IC                  | Q824    | 2SA733Q     | TRANSISTOR  |
| IC401   | STV9379      | IC                  | Q840    | 2SA1505-OY  | TRANSISTOR  |
| IC501   | TDA9103      | IC                  | Q841    | 2SC3875-GR  | TRANSISTOR  |
| IC521   | LM358MX      | IC                  | Q842    | 2SA1505-OY  | TRANSISTOR  |
| IC720   | UPC1406HA    | IC                  | Q843    | KTC200-OY   | TRANSISTOR  |
| IC721   | LM324MX      | IC                  | Q850    | 2SC3875-GR  | TRANSISTOR  |
| IC821   | UC3842N      | IC                  | Q863    | 2SB1548Q    | TRANSISTOR  |
| IC862   | L78LRO5C-MA  | IC                  | Q864    | 2SC3202-OY  | TRANSISTOR  |
| IC870   | LM324MX      | IC                  | Q865    | 2SB1548Q    | TRANSISTOR  |
| IC951   | LM324MX      | IC                  | Q866    | 2SC3202-OY  | TRANSISTOR  |
| IC1301  | LM1281N      | IC                  | Q868    | UN5211AI    | TRANSISTOR  |
| IC1302  | LM2419T      | HYBRID IC           | Q869    | UN5211AI    | TRANSISTOR  |
| IC1304  | KIA78505P    | IC                  | Q870    | 2SB1548Q    | TRANSISTOR  |
| IC1331  | LM358MX      | IC                  | Q871    | 2SC3202-OY  | TRANSISTOR  |
| IC1381  | LM358MX      | IC                  | Q873    | UN5211AI    | TRANSISTOR  |
| IC1401  | STV9422      | IC                  | Q874    | KTC200-OY   | TRANSISTOR  |
|         | TRANSISTORS  |                     | Q876    | UN5211AI    | TRANSISTOR  |
| Q101    | UN5111AI     | TRANSISTOR          | Q885    | 2SB1434R    | TRANSISTOR  |
| Q111    | UN5111AI     | TRANSISTOR          | Q886    | 2SC3876-OY  | TRANSISTOR  |
| Q112    | UN5211AI     | TRANSISTOR          | Q888    | UN5211AI    | TRANSISTOR  |
| Q207    | 2SC945Q      | TRANSISTOR          | Q889    | 2SC1473AR   | TRANSISTOR  |
| Q220    | 2SA1739R     | TRANSISTOR          | Q890    | UN5211AI    | TRANSISTOR  |
| Q221    | 2SC3811R     | TRANSISTOR          | Q891    | UN5211AI    | TRANSISTOR  |
| Q275    | UN5211AI     | TRANSISTOR          | Q901    | KTC200-OY   | TRANSISTOR  |
| Q279    | UN5211AI     | TRANSISTOR          | Q951    | 2SD1994AR   | TRANSISTOR  |
| Q286    | UN5111AI     | TRANSISTOR          | Q952    | 2SB1322AR   | TRANSISTOR  |
| Q287    | UN5211AI     | TRANSISTOR          | Q953    | 2SD1994AR   | TRANSISTOR  |
| Q301    | 2SC945Q      | TRANSISTOR          | Q954    | 2SB1322AR   | TRANSISTOR  |
| Q302    | 2SA733Q      | TRANSISTOR          | Q1051   | 2SA1767Q    | TRANSISTOR  |
| Q303    | 2SC945Q      | TRANSISTOR          | Q1052   | 2SC1473AR   | TRANSISTOR  |
| Q321    | 2SC945Q      | TRANSISTOR          | Q1151   | 2SA1767Q    | TRANSISTOR  |
| Q351    | 2SA733Q      | TRANSISTOR          | Q1152   | 2SC1473AR   | TRANSISTOR  |
| Q352    | 2SC1473AR    | TRANSISTOR          | Q1251   | 2SA1767Q    | TRANSISTOR  |
| Q353    | 2SC3902S     | TRANSISTOR          | Q1252   | 2SC1473AR   | TRANSISTOR  |
| Q354    | 2SA1507S     | TRANSISTOR          | Q1340   | 2SC3811R    | TRANSISTOR  |
| Q371    | 2SC1473AR    | TRANSISTOR          | Q1341   | UN5211AI    | TRANSISTOR  |
| Q379    | 2SC3876-OY   | TRANSISTOR          | Q1362   | 2SA1767Q    | TRANSISTOR  |
| Q521    | 2SD2058-GR   | TRANSISTOR          | Q1380   | 2SA733Q     | TRANSISTOR  |
| Q522    | 2SK2015Z     | TRANSISTOR          | Q1381   | UN5211AI    | TRANSISTOR  |
| Q551    | 2SC5243002FD | TRANSISTOR          | Q1401   | UN5211AI    | TRANSISTOR  |
| Q561    | UN5211AI     | TRANSISTOR          |         | DIODES      |             |
| Q562    | 2SK2350      | TRANSISTOR          | D108    | RB706F40    | DIODE       |
| Q564    | UN5211AI     | TRANSISTOR          | D111    | SML1816W    | DIODE(LED)  |
| Q565    | 2SK2350      | TRANSISTOR          | D151    | MTZJ5R6B    | DIODE       |
| Q581    | 2SD2058-GR   | TRANSISTOR          | D152    | MTZJ5R6B    | DIODE       |
| Q582    | 2SB1548Q     | TRANSISTOR          | D156    | MTZJ5R6B    | DIODE       |
| Q591    | 2SD1149R     | TRANSISTOR          |         |             |             |
| Q594    | UN5211AI     | TRANSISTOR          | D157    | MA728       | DIODE       |
|         |              |                     | D169    | MA142WK     | DIODE       |

| Ref.No. | Part No.    | Description | Ref.No. | Part No.               | Description    |
|---------|-------------|-------------|---------|------------------------|----------------|
| D185    | 1SS353      | DIODE       | D863    | TV5RG2                 | DIODE          |
| D186    | 1SS353      | DIODE       | D864    | RL4Z                   | DIODE          |
| D187    | 1SS353      | DIODE       | D865    | RL2Z                   | DIODE          |
| D188    | 1SS353      | DIODE       | D870    | RN3Z014-305            | DIODE          |
| D201    | MA4056NM    | DIODE       | D875    | MA4082NL               | DIODE          |
| D202    | MA4056NM    | DIODE       | D901    | 1N4002S                | DIODE          |
| D203    | MA4056NM    | DIODE       | D946    | 10DF6                  | DIODE          |
| D204    | MA4056NM    | DIODE       | D1001   | MA151K                 | DIODE          |
| D205    | MA152K      | DIODE       | D1002   | MA151K                 | DIODE          |
| D206    | MA152K      | DIODE       | D1051   | MA167A                 | DIODE          |
| D210    | MA700       | DIODE       | D1101   | MA151K                 | DIODE          |
| D220    | 1N4148      | DIODE       | D1102   | MA151K                 | DIODE          |
| D221    | 1N4148      | DIODE       | D1151   | MA167A                 | DIODE          |
| D271    | 1SS353      | DIODE       | D1201   | MA151K                 | DIODE          |
| D272    | 1SS353      | DIODE       | D1202   | MA151K                 | DIODE          |
| D273    | 1SS353      | DIODE       | D1251   | MA167A                 | DIODE          |
| D281    | 1SS353      | DIODE       | D1331   | 1N4148                 | DIODE          |
| D321    | 1N4148      | DIODE       | D1332   | 1N4148                 | DIODE          |
| D352    | 1N4148      | DIODE       | D1341   | MA151K                 | DIODE          |
| D401    | 1N4001S     | DIODE       | D1342   | MA151K                 | DIODE          |
| D403    | 1SS353      | DIODE       | D1343   | MA151K                 | DIODE          |
| D410    | 1N4148      | DIODE       | D1362   | 1N4148                 | DIODE          |
| D411    | MA4051NM    | DIODE       | D1365   | MA4051NM               | DIODE          |
| D421    | 1N4148      | DIODE       | D1366   | MA4051NM               | DIODE          |
| D501    | MA700       | DIODE       | D1367   | MA4051NM               | DIODE          |
| D521    | MA4150NM    | DIODE       | D1380   | MA4082NL               | DIODE          |
| D522    | 1N4148      | DIODE       | D1381   | EU02Z                  | DIODE          |
| D523    | MA30WA      | DIODE       | D1382   | ERA18-04               | DIODE          |
| D530    | MA4051NM    | DIODE       | D1385   | ERA1502                | DIODE          |
| D551    | FMP-3FU     | DIODE       | D1401   | MTZJ5R6B               | DIODE          |
| D552    | RP3F014-302 | DIODE       | D1403   | MTZJ5R6B               | DIODE          |
| D553    | TV5RG2A     | DIODE       | D1404   | MTZJ5R6B               | DIODE          |
| D554    | 11DQ04      | DIODE       | J141    | ERA81004               | DIODE          |
| D555    | EL1Z        | DIODE       | L601    | MTZJ15C                | DIODE          |
| D561    | 10DF6       | DIODE       |         | COIL &<br>TRANSFORMERS |                |
| D564    | 10DF6       | DIODE       | D657    | TSK8029                | FERRITE CORE   |
| D571    | 1SS353      | DIODE       | J112    | EXCELSA35T             | LC COMBINATION |
| D572    | 1SS353      | DIODE       | L180    | ELEY561KA              | PEAKING COIL   |
| D573    | 1SS353      | DIODE       | L230    | EXCELSR35S             | LC COMBINATION |
| D581    | ERC30-02    | DIODE       | L301    | EXCELD35C              | LC COMBINATION |
| D582    | ERC30-02    | DIODE       | L555    | TLH85820Z1             | COIL           |
| D591    | MA27WB      | DIODE       | L556    | EXCELSA35T             | LC COMBINATION |
| D614    | ERA1506     | DIODE       | L558    | TLH4001                | COIL           |
| D615    | DTZTT112R7A | DIODE       | L582    | TLH85815T              | COIL           |
| D651    | 1N4148      | DIODE       | L591    | TLUACNB220K            | PEAKING COIL   |
| D654    | ERA34-10    | DIODE       | L602    | EXCELSA35T             | LC COMBINATION |
| D655    | 10DF6       | DIODE       | L801    | TLP4C65530D            | LINE FILTER    |
| D656    | 1N4148      | DIODE       | L802    | TLP4C65530D            | LINE FILTER    |
| D671    | 31DF2       | DIODE       | L821    | TSK8029                | FERRITE CORE   |
| D681    | MA700       | DIODE       | L822    | TSKB031                | FERRITE CORE   |
| D821    | FBU4K       | DIODE       | L823    | TSK8029                | FERRITE CORE   |
| D822    | ERA34-10    | DIODE       | L824    | EXCELSA35T             | LC COMBINATION |
| D823    | ERA3202     | DIODE       | L825    | EXCELSA35T             | LC COMBINATION |
| D824    | MA4100NL    | DIODE       | L861    | EXCELD35C              | LC COMBINATION |
| D827    | 1N4148      | DIODE       | L862    | EXCELD35C              | LC COMBINATION |
| D828    | 1N4148      | DIODE       | L863    | EXCELD35C              | LC COMBINATION |
| D829    | 1SS353      | DIODE       | L864    | EXCELD35C              | LC COMBINATION |
| D830    | ERA34-10    | DIODE       | L865    | EXCELD35C              | LC COMBINATION |
| D840    | MA4200NH    | DIODE       | L870    | EXCELD35C              | LC COMBINATION |
| D850    | MA4062NH    | DIODE       | L1051   | TLTR47K186T            | PEAKING COIL   |
| D861    | ERC3806     | DIODE       |         |                        |                |
| D862    | FML-G14S    | DIODE       |         |                        |                |

| Ref.No.    | Part No.     | Description         | Ref.No. | Part No.     | Description       |
|------------|--------------|---------------------|---------|--------------|-------------------|
| L1151      | TLTR33K186T  | PEAKING COIL        | C289    | ECUX1H103KBG | C 0.01UF K 50V    |
| L1251      | TLTR22K186T  | PEAKING COIL        | C290    | ECUX1H471KBN | C 470PF K 50V     |
| L1302      | TSK8029      | FERRITE CORE        | C291    | ECUX1H470JCG | C 47PF J 50V      |
| L1303      | TSK8029      | FERRITE CORE        | C292    | ECUX1H470JCG | C 47PF J 50V      |
| L1304      | TSK8029      | FERRITE CORE        | C296    | ECUX1H103KBG | C 0.01UF K 50V    |
| L1305      | EXCELD3R35C  | LC COMBINATION      | C301    | ECCF1H151J   | C 150PF J 50V     |
| L1306      | EXCELD3R35C  | LC COMBINATION      | C302    | ECKF1H332KB  | C 3300PF K 50V    |
| L1307      | TSK8029      | FERRITE CORE        | C303    | ECQV1H104JL  | P 0.1UF J 50V     |
| L1308      | EXCELD3R35C  | LC COMBINATION      | C304    | ECUX1H102JCX | C 1000PF J 50V    |
| L1351      | TSK8029      | FERRITE CORE        | C305    | ECEA1EGE100  | E 10UF 25V        |
| L1352      | TSK8031      | FERRITE CORE        | C306    | ECUX1H101JCG | C 100PF J 50V     |
| L1361      | TSK8029      | FERRITE CORE        | C311    | ECEA1CGE101  | E 100UF 16V       |
| L1362      | TSK8031      | FERRITE CORE        | C312    | ECUX1H103KBG | C 0.01UF K 50V    |
| L1371      | TSK8029      | FERRITE CORE        | C321    | ECUX1H103KBG | C 0.01UF K 50V    |
| △ T351     | TLHG011      | D.A.F. TRANSFORMER  | C322    | ECEA1EGE100  | E 10UF 25V        |
| △ T521     | TLH4C65407D  | COIL                | C323    | ECQV1H104JL  | P 0.1UF J 50V     |
| △ T601     | ETF39L91AZ   | FLYBACK TRANSFORMER | C351    | ECEA1CGE470  | E 47UF 16V        |
| △ T671     | TLHX007      | TRANSFORMER         | C352    | ECEA2AGE100  | E 10UF 100V       |
| △ T821     | TLPA020      | POWER TRANSFORMER   | C353    | ECQV1474JZ   | P 0.47UF J 100V   |
| △ T822     | TLPX006      | TRANSFORMER         | C354    | ECUX1H331KBN | C 330PF K 50V     |
| CONTROL    |              |                     | C371    | ECEA1EGE100  | E 10UF 25V        |
| VR581      | EVND1AA00B13 | CONTROL B 1K OHM    | C372    | ECKD2H471KB5 | C 470PF K 500V    |
| VR881      | EVND1AA00B13 | CONTROL B 1K OHM    | C401    | ECEA1EGN101  | E 100UF 25V       |
| CAPACITORS |              |                     | C402    | ECEA1VGE101  | E 100UF 35V       |
| C2         | ECQB1H472JF  | P 4700PF J 50V      | C403    | ECKF1H222KB  | C 2200PF K 50V    |
| C101       | ECEA1AGE101  | E 100UF 10V         | C404    | ECEA1EGE471  | E 470UF 25V       |
| C103       | ECUX1H103KBG | C 0.01UF K 50V      | C405    | ECKF1H561KB  | C 560PF K 50V     |
| C104       | ECUX1H103KBG | C 0.01UF K 50V      | C406    | ECQV1H104JL  | P 0.1UF J 50V     |
| C105       | ECUX1H220JCN | C 22PF J 50V        | C407    | ECQV1H224JL  | P 0.22UF J 50V    |
| C106       | ECUX1H220JCN | C 22PF J 50V        | C408    | ECUX1H333KBX | C 0.033UF K 50V   |
| C107       | ECUX1H103KBG | C 0.01UF K 50V      | C409    | ECUX1H150JCN | C 15PF J 50V      |
| C108       | ECEA1HGE010  | E 1UF 50V           | C421    | ECUX1H330JCG | C 33PF J 50V      |
| C109       | ECUX1C105ZFX | C 1UF Z 16V         | C422    | ECQV1H105JL  | P 1UF J 50V       |
| C110       | ECUX1H221KBN | C 220PF K 50V       | C423    | ECQV1H154JL  | P 0.15UF J 50V    |
| C111       | ECUX1H220JCN | C 22PF J 50V        | C424    | ECUX1H681JCX | C 680PF J 50V     |
| C112       | ECUX1H221KBN | C 220PF K 50V       | C426    | ECEA1CGE101  | E 100UF 16V       |
| C113       | ECUX1C105ZFX | C 1UF Z 16V         | C427    | ECUX1H103KBG | C 0.01UF K 50V    |
| C121       | ECUX1H103KBG | C 0.01UF K 50V      | C430    | ECEA1HGE010  | E 1UF 50V         |
| C175       | ECUX1H103KBG | C 0.01UF K 50V      | C431    | ECEA1EGE100  | E 10UF 25V        |
| C177       | ECUX1H103KBG | C 0.01UF K 50V      | C432    | ECUX1H104ZFX | C 0.1UF Z 50V     |
| C180       | ECEA1AGE471  | E 470UF 10V         | C433    | ECUX1H103KBG | C 0.01UF K 50V    |
| C185       | ECUX1H102KBN | C 1000PF K 50V      | C501    | ECQB1H103JF  | P 0.01UF J 50V    |
| C186       | ECUX1H102KBN | C 1000PF K 50V      | C502    | ECQV1H104JL  | P 0.1UF J 50V     |
| C201       | ECEA1HGE2R2  | E 2.2UF 50V         | C504    | ECUX1H820JCG | C 82PF J 50V      |
| C203       | ECUX1H102KBN | C 1000PF K 50V      | C505    | ECEA1CGE101  | E 100UF 16V       |
| C206       | ECQE2104KF   | P 0.1UF K 200V      | C506    | ECQP1H681GZ  | PP 680PF G 50V    |
| C230       | ECUX1H103KBG | C 0.01UF K 50V      | C507    | ECUX1H472KBG | C 4700PF K 50V    |
| C231       | EEUFC1A221   | E 220UF 10V         | C508    | ECEA1CGE470  | E 47UF 16V        |
| C234       | ECUX1H470JCG | C 47PF J 50V        | C509    | ECQV1H224JL  | P 0.22UF J 50V    |
| C270       | EEAFC1C560   | E 56UF 16V          | C512    | ECUX1H104ZFX | C 0.1UF Z 50V     |
| C279       | ECUX1H221KBN | C 220PF K 50V       | C513    | ECEA1CGE102  | E 1000UF 16V      |
| C280       | ECQV1H474JL  | P 0.47UF J 50V      | C514    | ECQV1H105JL  | P 1UF J 50V       |
| C281       | ECUX1H472KBG | C 4700PF K 50V      | C521    | ECUX1H103KBG | C 0.01UF K 50V    |
| C282       | ECEA1HGE010  | E 1UF 50V           | C522    | ECUX1H102JCX | C 1000PF J 50V    |
| C283       | ECEA1HGE2R2  | E 2.2UF 50V         | C523    | ECEA1EGE221  | E 220UF 25V       |
| C284       | ECEA1HGE010  | E 1UF 50V           | C524    | ECKD2H332KB5 | C 3300PF K 500V   |
| C285       | ECEA1HGER47  | E 0.47UF 50V        | C525    | ECEA1VGE470  | E 47UF 35V        |
| C286       | ECUX1H333KBX | C 0.033UF K 50V     | C539    | ECUX1H103KBG | C 0.01UF K 50V    |
| C287       | ECUX1H102KBN | C 1000PF K 50V      | C545    | ECEA1EGE100  | E 10UF 25V        |
| C288       | ECUX1H102KBN | C 1000PF K 50V      | C551    | ECWH15H472HN | PP 4700PF H 1.5KV |
|            |              |                     | C552    | ECKD3F621JBP | C 820PF J 3KV     |
|            |              |                     | C553    | ECQF6272JZ   | PP 2700PF J 600V  |

| Ref.No. | Part No.     | Description      | Ref.No. | Part No.     | Description      |
|---------|--------------|------------------|---------|--------------|------------------|
| C554    | ECQF6182JZ   | PP 1800PF J 600V | C834    | ECKD3A681KBP | C 680PF K 1KV    |
| C558    | ECKD3A102KBP | C 1000PF K 1KV   | C844    | ECEA1CGE470  | E 470UF 16V      |
| C559    | ECWF2274J8   | PP 0.27UF J 200V | C846    | ECCF1H221J   | C 220PF J 50V    |
| C560    | ECWF2274J8   | PP 0.27UF J 200V | C851    | ECQB1H473JF  | P 0.047UF J 50V  |
| C561    | ECUX1H103KBG | C 0.01UF K 50V   | C852    | ECUX1H273KBP | C 0.027UF K 50V  |
| C562    | ECUX1H473ZFX | C 0.047UF Z 50V  | C860    | ECUX1C474ZFX | C 0.47UF Z 16V   |
| C563    | ECWF2244JB   | PP 0.24UF J 200V | C861    | ECEA2AGE221  | E 220UF 100V     |
| C564    | ECUX1H103KBG | C 0.01UF K 50V   | C862    | EEUFC1J821   | E 820UF 63V      |
| C565    | ECUX1H473ZFX | C 0.047UF Z 50V  | C863    | ECEA1VGE471  | E 470UF 35V      |
| C566    | ECWF2105JB   | PP 1UF J 200V    | C864    | ECEA1EGE222  | E 2200UF 25V     |
| C571    | ECUX1H102JCX | C 1000PF J 50V   | C865    | ECEA1CGE332  | E 3300UF 16V     |
| C576    | ECUX1H104ZFX | C 0.1UF Z 50V    | C867    | ECQV1H104JL  | P 0.1UF J 50V    |
| C581    | ECEA1CGE471  | E 470UF 16V      | C868    | ECEA1EGE100  | E 10UF 25V       |
| C582    | ECEA1CGE471  | E 470UF 16V      | C870    | ECEA1EGE102  | E 1000UF 25V     |
| C583    | ECUX1H102KBN | C 1000PF K 50V   | C871    | ECEA1CGE101  | E 100UF 16V      |
| C584    | ECQV1H684JL  | P 0.68UF J 50V   | C872    | ECEA1VGE331  | E 330UF 35V      |
| C587    | ECQE2224KF   | P 0.22UF K 200V  | C874    | ECEA1CGE221  | E 220UF 16V      |
| C588    | ECQE2274KF   | P 0.27UF K 200V  | C875    | ECEA1EGE100  | E 10UF 25V       |
| C589    | ECKF1H222K3  | C 2200PF K 50V   | C876    | ECEA1EGE100  | E 10UF 25V       |
| C591    | ECUX1H222KBN | C 2200PF K 50V   | C878    | ECQB1H103JF  | P 0.01UF J 50V   |
| C592    | ECKD2H332KBS | C 3300PF K 500V  | C879    | ECQB1H682JF  | P 6800PF J 50V   |
| C593    | ECQE1335KF   | P 3.3UF K 100V   | C901    | TACCU102P500 | C 1000PF 500V    |
| C651    | ECEA2CGE2R2  | E 2.2UF 160V     | C902    | ECEA1HGE4R7  | E 4.7UF 50V      |
| C654    | ECKD2H103KBS | C 0.01UF K 500V  | C946    | ECEA2CGE330  | E 33UF 160V      |
| C655    | ECEA2EGE100  | E 10UF 250V      | C951    | ECQV1H334JL  | P 0.33UF J 50V   |
| C656    | ECEA2AGE220  | E 22UF 100V      | C952    | ECEA1HGE4R7  | E 4.7UF 50V      |
| C671    | ECKD2H221KBS | C 220PF K 500V   | C953    | ECQV1H334JL  | P 0.33UF J 50V   |
| C672    | TAC1102Z221A | E 220UF 200V     | C954    | ECEA1HGE4R7  | E 4.7UF 50V      |
| C673    | ECUX1H220JCN | C 22PF J 50V     | C955    | ECUX1H103KBG | C 0.01UF K 50V   |
| C674    | ECUX1H392JCW | C 3900PF J 50V   | C1001   | ECEA1EGE100  | E 10UF 25V       |
| C680    | ECUX1H222KBN | C 2200PF K 50V   | C1002   | ECUX1H104ZFX | C 0.1UF Z 50V    |
| C683    | ECUX1H102JCX | C 1000PF J 50V   | C1003   | ECUX1E224ZFX | C 0.22UF Z 25V   |
| C685    | ECUX1H103KBG | C 0.01UF K 50V   | C1004   | ECUX1C105ZFX | C 1UF Z 16V      |
| C696    | ECQB2223KF   | P 0.022UF K 200V | C1005   | ECUX1H150JCN | C 15PF J 50V     |
| C697    | TACCG102P200 | C 1000PF 200V    | C1051   | ECQV1334JM   | P 0.33UF J 100V  |
| C698    | ECUX1H102JCX | C 1000PF J 50V   | C1052   | ECKD2H102KBS | C 1000PF K 500V  |
| C699    | ECUX1H104ZFX | C 0.1UF Z 50V    | C1053   | ECQB1103KF   | P 0.01UF K 100V  |
| C707    | ECEA1EGE100  | E 10UF 25V       | C1054   | ECUX1H104ZFX | C 0.1UF Z 50V    |
| C719    | ECEA1EGE100  | E 10UF 25V       | C1055   | ECQB1683KF   | P 0.068UF K 100V |
| C725    | ECEA1EGE100  | E 10UF 25V       | C1056   | ECUX1H103KBG | C 0.01UF K 50V   |
| C726    | ECEA1EGE101  | E 100UF 25V      | C1101   | ECEA1EGE100  | E 10UF 25V       |
| C727    | ECUX1E563KBP | C 0.056UF K 25V  | C1102   | ECUX1H104ZFX | C 0.1UF Z 50V    |
| C728    | ECUX1H103KBG | C 0.01UF K 50V   | C1103   | ECUX1E224ZFX | C 0.22UF Z 25V   |
| C770    | ECUX1C225ZFW | C 2.2UF Z 16V    | C1104   | ECUX1C105ZFX | C 1UF Z 16V      |
| △ C801  | ECQU2A334MVZ | PP 0.33UF M 250V | C1105   | ECUX1H050CCN | C 5PF C 50V      |
| △ C802  | ECQU2A334MVZ | PP 0.33UF M 250V | C1151   | ECQV1334JM   | P 0.33UF J 100V  |
| △ C803  | ECKDRS472ME  | C 4700PF M 500V  | C1152   | ECKD2H102KBS | C 1000PF K 500V  |
| △ C804  | ECKDRS472ME  | C 4700PF M 100V  | C1153   | ECQB1103KF   | P 0.01UF K 100V  |
| △ C805  | ECKDRS472ME  | C 4700PF M 100V  | C1154   | ECUX1H104ZFX | C 0.1UF Z 50V    |
| C821    | TAC1094Z331A | E 330UF 400V     | C1155   | ECQB1683KF   | P 0.068UF K 100V |
| C822    | ECQV1H104JL  | P 0.1UF J 50V    | C1156   | ECUX1H103KBG | C 0.01UF K 50V   |
| C823    | ECKF1H222KB  | C 2200PF K 50V   | C1201   | ECEA1EGE100  | E 10UF 25V       |
| C824    | ECQB1H152JF  | P 1500PF J 50V   | C1202   | ECUX1H104ZFX | C 0.1UF Z 50V    |
| C825    | ECEA1EGE100  | E 10UF 25V       | C1203   | ECUX1E224ZFX | C 0.22UF Z 25V   |
| C826    | ECQE6473KF   | P 0.047UF K 600V | C1204   | ECUX1C105ZFX | C 1UF Z 16V      |
| C827    | ECKD3A681KBP | C 680PF K 1KV    | C1205   | ECUX1H050CCN | C 5PF C 50V      |
| C828    | ECQB1H103JF  | P 0.01UF J 50V   | C1251   | ECQV1334JM   | P 0.33UF J 100V  |
| C829    | ECQV1H104JL  | P 0.1UF J 50V    | C1252   | ECKD2H102KBS | C 1000PF K 500V  |
| C830    | ECEA1EGE101  | E 100UF 25V      | C1253   | ECQB1103KF   | P 0.01UF K 100V  |
| △ C831  | ECKDRS222ME  | C 2200PF M 50V   | C1254   | ECUX1H104ZFX | C 0.1UF Z 50V    |
| △ C832  | ECKDRS222ME  | C 2200PF M 100V  | C1255   | ECQB1683KF   | P 0.068UF K 100V |
| C833    | ECCF1H101J   | C 100PF J 50V    | C1256   | ECUX1H103KBG | C 0.01UF K 50V   |

| Ref.No.   | Part No.     | Description        | Ref.No. | Part No.     | Description  |
|-----------|--------------|--------------------|---------|--------------|--------------|
| C1301     | ECEA1CGE101  | E 100UF 16V        | J704    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1302     | ECUX1H103K8G | C 0.01UF K 50V     | J705    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1303     | ECUX1H104ZFX | C 0.1UF Z 50V      | J706    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1304     | ECUX1E224ZFX | C 0.22UF Z 25V     | J707    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1305     | ECUX1H103K8G | C 0.01UF K 50V     | J708    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1306     | ECUX1H103K8G | C 0.01UF K 50V     | J709    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1307     | ECEA1EGE100  | E 10UF 25V         | J710    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1309     | ECUX1E224ZFX | C 0.22UF Z 25V     | J711    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1310     | ECEA1CGE221  | E 220UF 16V        | J712    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1312     | ECEA2AGE101  | E 100UF 100V       | J713    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1313     | ECQV1H104JM  | P 0.1UF J 100V     | J714    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1314     | ECQV1H104JL  | P 0.1UF J 50V      | J715    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1315     | TACCU103P200 | C 0.01UF 200V      | J716    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1320     | ECQV1H104JL  | P 0.1UF J 50V      | J717    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1321     | ECEA2CGE2R2  | E 2.2UF 160V       | J718    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1324     | ECKD2H471K85 | C 470PF K 500V     | J719    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1327     | TACCU103P200 | C 0.01UF 200V      | J720    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1328     | TACCU103P200 | C 0.01UF 200V      | J721    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1329     | TACCU103P200 | C 0.01UF 200V      | J722    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1331     | ECUX1E224ZFX | C 0.22UF Z 25V     | J723    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1332     | ECUX1E224ZFX | C 0.22UF Z 25V     | J724    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1333     | ECUX1H103K8G | C 0.01UF K 50V     | J725    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1334     | TCUX2H101JCM | C 100PF J 500V     | J728    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1336     | ECKD2H222K85 | C 2200PF K 500V    | J729    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1341     | ECUX1H221JCG | C 220PF J 50V      | J730    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1361     | ECKD2H472K85 | C 4700PF K 500V    | J731    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1362     | ECCD2H100D   | C 10PF D 500V      | J732    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1370     | ECKD2H102K85 | C 1000PF K 500V    | J733    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1371     | ECKD3D272KBP | C 2700PF K 2KV     | J734    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1380     | ECEA1CGE470  | E 47UF 16V         | J735    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1381     | ECUX1H103K8G | C 0.01UF K 50V     | J736    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1382     | TACCG102P200 | C 1000PF 200V      | J737    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1401     | ECEA1HGE010  | E 1UF 50V          | J738    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1402     | ECUX1H104ZFX | C 0.1UF Z 50V      | J739    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1403     | ECEA1EGE100  | E 10UF 25V         | J740    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1406     | ECUX1H332KBN | C 3300PF K 50V     | J741    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| C1410     | ECUX1H220JCN | C 22PF J 50V       | J742    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| RESISTORS |              |                    |         |              |              |
| C102      | ERJ6GEYJ472  | M 4.7K OHM J 1/10W | J743    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J601      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J744    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J602      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J745    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J603      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J746    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J605      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J747    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J607      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J748    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J609      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J750    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J610      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J751    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J611      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J752    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J612      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J753    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J613      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J754    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J614      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J755    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J615      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J756    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J616      | ERJ8GCRYOR00 | M 0 OHM 1/8W       | J757    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J617      | ERJ6GEYJ183  | M 18K OHM J 1/10W  | J758    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J618      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J759    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J619      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J761    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J620      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J762    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J621      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J763    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J622      | ERJ6GEYOR00  | M 0 OHM 1/10W      | J764    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J701      | ERJ8GCRYOR00 | M 0 OHM 1/8W       | J767    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J702      | ERJ8GCRYOR00 | M 0 OHM 1/8W       | J768    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
| J703      | ERJ8GCRYOR00 | M 0 OHM 1/8W       | J770    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
|           |              |                    | J771    | ERJ8GCRYOR00 | M 0 OHM 1/8W |
|           |              |                    | J772    | ERJ8GCRYOR00 | M 0 OHM 1/8W |

| Ref.No. | Part No.     | Description         | Ref.No. | Part No.    | Description         |
|---------|--------------|---------------------|---------|-------------|---------------------|
| J775    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R206    | ERJ6GEYJ103 | M 10K OHM J 1/10W   |
| J776    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R220    | ERDS2TJ561  | C 560 OHM J 1/4W    |
| J777    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R221    | ERJ6GEYJ103 | M 10K OHM J 1/10W   |
| J778    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R222    | ERJ6GEYJ224 | M 220K OHM J 1/10W  |
| J779    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R224    | ERJ6GEYJ472 | M 4.7K OHM J 1/10W  |
| J780    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R226    | ERJ6GEYJ821 | M 820 OHM J 1/10W   |
| J781    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R227    | ERDS2TJ102  | C 1K OHM J 1/4W     |
| J782    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R228    | ERJ6GEYJ471 | M 470 OHM J 1/10W   |
| J783    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R261    | ERJ6ENF2702 | M 27K OHM F 1/10W   |
| J784    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R262    | ERJ6ENF2103 | M 210K OHM F 1/10W  |
| J785    | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R271    | ERJ6GEYJ102 | M 1K OHM J 1/10W    |
| J1105   | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R272    | ERJ6GEYJ122 | M 1.2K OHM J 1/10W  |
| L1001   | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R273    | ERJ6GEYJ103 | M 10K OHM J 1/10W   |
| L1101   | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R274    | ERJ6GEYJ103 | M 10K OHM J 1/10W   |
| L1201   | ERJ8GCRYOR00 | M 0 OHM 1/8W        | R275    | ERJ6GEYJ102 | M 1K OHM J 1/10W    |
| R101    | ERJ6GEYJ152  | M 1.5K OHM J 1/10W  | R276    | ERJ6GEYJ102 | M 1K OHM J 1/10W    |
| R102    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W  | R278    | ERJ6GEYJ582 | M 5.6K OHM J 1/10W  |
| R106    | ERDS2TJ331   | C 330 OHM J 1/4W    | R279    | ERJ6GEYJ103 | M 10K OHM J 1/10W   |
| R108    | ERJ6GEYJ104  | M 100K OHM J 1/10W  | R280    | ERJ6GEYJ151 | M 150 OHM J 1/10W   |
| R109    | ERJ6ENF1782  | M 17.8K OHM F 1/10W | R281    | ERJ6GEYJ106 | M 10M OHM J 1/10W   |
| R110    | ERJ6ENF5621  | M 5.62K OHM F 1/10W | R282    | ERJ6GEYJ152 | M 1.5K OHM J 1/10W  |
| R111    | ERJ6ENF1182  | M 11.8K OHM F 1/10W | R283    | ERJ6GEYJ561 | M 560 OHM J 1/10W   |
| R112    | ERJ6ENF3242  | M 32.4K OHM F 1/10W | R284    | ERJ6GEYJ562 | M 5.6K OHM J 1/10W  |
| R113    | ERJ6ENF1782  | M 17.8K OHM F 1/10W | R285    | ERJ6GEYJ222 | M 2.2K OHM J 1/10W  |
| R114    | ERJ6ENF1782  | M 17.8K OHM F 1/10W | R286    | ERJ6GEYJ562 | M 5.6K OHM J 1/10W  |
| R115    | ERDS2TJ331   | C 330 OHM J 1/4W    | R287    | ERJ6GEYJ392 | M 3.9K OHM J 1/10W  |
| R116    | ERJ6ENF3242  | M 32.4K OHM F 1/10W | R288    | ERJ6GEYJ472 | M 4.7K OHM J 1/10W  |
| R119    | ERJ6GEYJ102  | M 1K OHM J 1/10W    | R289    | ERJ6GEYJ472 | M 4.7K OHM J 1/10W  |
| R121    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R290    | ERJ6GEYJ472 | M 4.7K OHM J 1/10W  |
| R122    | ERJ8GCRYJ331 | M 330 OHM J 1/8W    | R291    | ERJ6GEYJ102 | M 1K OHM J 1/10W    |
| R123    | ERJ6GEYJ473  | M 47K OHM J 1/10W   | R292    | ERJ6GEYJ102 | M 1K OHM J 1/10W    |
| R124    | ERJ8GCRYJ331 | M 330 OHM J 1/8W    | R293    | ERJ6GEYJ182 | M 1.8K OHM J 1/10W  |
| R126    | ERJ8GCRYJ331 | M 330 OHM J 1/8W    | R294    | ERJ6GEYJ472 | M 4.7K OHM J 1/10W  |
| R151    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R295    | ERJ6GEYJ472 | M 4.7K OHM J 1/10W  |
| R154    | ERJ6GEYOR00  | M 0 OHM 1/10W       | R296    | ERJ6GEYJ104 | M 100K OHM J 1/10W  |
| R155    | ERJ6GEYOR00  | M 0 OHM 1/10W       | R301    | ERDS2TJ332  | C 3.3K OHM J 1/4W   |
| R156    | ERJ6GEYOR00  | M 0 OHM 1/10W       | R302    | ERDS2TJ102  | C 1K OHM J 1/4W     |
| R157    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R303    | ERDS2TJ222  | C 2.2K OHM J 1/4W   |
| R158    | ERJ6GEYJ392  | M 3.9K OHM J 1/10W  | R304    | ERDS2TJ222  | C 2.2K OHM J 1/4W   |
| R159    | ERJ6GEYJ392  | M 3.9K OHM J 1/10W  | R305    | ERDS2TJ180  | C 18 OHM J 1/4W     |
| R160    | ERJ6GEYJ332  | M 3.3K OHM J 1/10W  | R306    | ERDS2TJ102  | C 1K OHM J 1/4W     |
| R161    | ERJ6GEYJ333  | M 33K OHM J 1/10W   | R307    | ERJ6ENF5622 | M 56.2K OHM F 1/10W |
| R165    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R308    | ERJ6ENF3322 | M 33.2K OHM F 1/10W |
| R166    | ERJ6GEYJ512  | M 5.1K OHM J 1/10W  | R309    | ERJ6GEYJ473 | M 47K OHM J 1/10W   |
| R170    | ERJ6GEYJ101  | M 100 OHM J 1/10W   | R310    | ERJ6GEYJ104 | M 100K OHM J 1/10W  |
| R171    | ERJ6GEYJ101  | M 100 OHM J 1/10W   | R311    | ERJ6GEYJ122 | M 1.2K OHM J 1/10W  |
| R172    | ERJ6GEYJ223  | M 22K OHM J 1/10W   | R312    | ERJ6GEYJ103 | M 10K OHM J 1/10W   |
| R173    | ERJ6GEYJ223  | M 22K OHM J 1/10W   | R313    | ERJ6GEYJ101 | M 100 OHM J 1/10W   |
| R174    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R321    | ERJ6ENF4752 | M 47.5K OHM F 1/10W |
| R175    | ERJ8GCRYJ101 | M 100 OHM J 1/8W    | R322    | ERJ6ENF5902 | M 59K OHM F 1/10W   |
| R176    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R324    | ERJ6ENF4532 | M 45.3K OHM F 1/10W |
| R177    | ERJ6GEYJ471  | M 470 OHM J 1/10W   | R325    | ERJ6GEYJ104 | M 100K OHM J 1/10W  |
| R178    | ERJ8GCRYJ101 | M 100 OHM J 1/8W    | R326    | ERDS2TJ333  | C 33K OHM J 1/4W    |
| R179    | ERJ8GCRYJ101 | M 100 OHM J 1/8W    | R327    | ERDS2TJ564  | C 560K OHM J 1/4W   |
| R184    | ERJ6GEYJ471  | M 470 OHM J 1/10W   | R328    | ERJ6GEYJ682 | M 6.8K OHM J 1/10W  |
| R185    | ERJ6GEYOR00  | M 0 OHM 1/10W       | R329    | ERJ6GEYJ222 | M 2.2K OHM J 1/10W  |
| R186    | ERJ6GEYOR00  | M 0 OHM 1/10W       | R330    | ERDS2TJ681  | C 680 OHM J 1/4W    |
| R201    | ERJ8GCRYJ22  | M 1.2K OHM J 1/8W   | R351    | ERDS2TJ102K | C 1K OHM J 1/4W     |
| R202    | ERJ8GCRYJ22  | M 1.2K OHM J 1/8W   | R352    | ERJ6ENF2571 | M 2.67K OHM F 1/10W |
| R203    | ERJ6GEYJ392  | M 3.9K OHM J 1/10W  | R354    | ERJ6GEYJ182 | M 1.8K OHM J 1/10W  |
| R204    | ERJ6GEYJ392  | M 3.9K OHM J 1/10W  | R355    | ERJ6ENF6652 | M 66.5K OHM F 1/10W |
| R205    | ERJ6GEYJ392  | M 3.9K OHM J 1/10W  | R356    | ERDS2TJ223  | C 22K OHM J 1/4W    |

| Ref.No. | Part No.     | Description         | Ref.No. | Part No.     | Description         |
|---------|--------------|---------------------|---------|--------------|---------------------|
| R357    | ERDS2TJ470   | C 47 OHM J 1/4W     | R547    | ERJ6ENF5111  | M 5.11K OHM F 1/10W |
| R358    | ERDS2TJ100   | C 10 OHM J 1/4W     | R548    | ERJ6GEYJ102  | M 1K OHM J 1/10W    |
| R359    | ERDS2TJ100   | C 10 OHM J 1/4W     | R554    | ERX2SJ1R5    | M 1.5 OHM J 2W      |
| R360    | ERQ14AJ101   | F 100 OHM J 1/4W    | R555    | ERX2SJ1R2    | M 1.2 OHM J 2W      |
| R371    | ERD25FJ332K  | C 3.3K OHM J 1/4W   | R557    | ERX3FJX6R8C  | M 6.8 OHM J 3W      |
| R372    | ERDS1FJ224   | C 220K OHM J 1/2W   | R558    | ERDS1FJ221   | C 220 OHM J 1/2W    |
| R373    | ERDS2TJ395   | C 3.9K OHM J 1/4W   | R561    | ERDS1FJ472   | C 4.7K OHM J 1/2W   |
| R374    | ERDS2TJ473   | C 47K OHM J 1/4W    | R562    | ERJ8GCVJ472  | M 4.7K OHM J 1/8W   |
| R375    | EROS2CKF2671 | M 2.67K OHM F 1/4W  | R563    | ERJ6GEYJ100  | M 10 OHM J 1/10W    |
| R377    | ERJ6GEYJ102  | M 1K OHM J 1/10W    | R564    | ERDS1FJ472   | C 4.7K OHM J 1/2W   |
| R378    | ERJ6ENF1001  | M 1K OHM F 1/10W    | R565    | ERJ8GCVJ472  | M 4.7K OHM J 1/8W   |
| R379    | ERJ6ENF1001  | M 1K OHM F 1/10W    | R566    | ERJ6GEYJ100  | M 10 OHM J 1/10W    |
| R401    | ERO25CKF1782 | M 17.8K OHM F 1/4W  | R571    | ERJ6GEYJ474  | M 470K OHM J 1/10W  |
| R402    | ERJ6GEYJ882  | M 6.8K OHM J 1/10W  | R572    | ERJ6GEYJ274  | M 270K OHM J 1/10W  |
| R403    | ERJ6GEYJ123  | M 12K OHM J 1/10W   | R573    | ERJ6GEYJ104  | M 100K OHM J 1/10W  |
| R404    | ERO25CKF3162 | M 31.6K OHM F 1/4W  | R576    | ERJ6GEYJ153  | M 15K OHM J 1/10W   |
| R405    | ERDS2TJ1R0   | C 1 OHM J 1/4W      | R577    | ERJ6GEYJ822  | M 8.2K OHM J 1/10W  |
| R406    | ERX1SJ1R0    | M 1 OHM J 1W        | R579    | ERG3FJ182    | M 1.8K OHM J 3W     |
| R407    | ERG1SJ221    | M 220 OHM J 1W      | R581    | ERDS2TJ101   | C 100 OHM J 1/4W    |
| R408    | ERJ6GEYJ681  | M 680 OHM J 1/10W   | R582    | ERDS2TJ101   | C 100 OHM J 1/4W    |
| R411    | ERJ6GEYJ122  | M 1.2K OHM J 1/10W  | R583    | ERJ8GCVJ332  | M 3.3K OHM J 1/8W   |
| R412    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R584    | TAR18BKOR11Z | F 0.11 OHM K 1/4W   |
| R421    | ERJ6GEYJ183  | M 18K OHM J 1/10W   | R585    | ERG3FJ220    | M 22 OHM J 3W       |
| R422    | ERJ6GEYJ123  | M 12K OHM J 1/10W   | R587    | ERDS1FJ105   | C 1M OHM J 1/2W     |
| R440    | ERJ6GEYJ153  | M 15K OHM J 1/10W   | R588    | ERDS1FJ274   | C 270K OHM J 1/2W   |
| R441    | ERJ6GEYJ333  | M 33K OHM J 1/10W   | R589    | ERDS1FJ564   | C 560K OHM J 1/2W   |
| R442    | ERJ6GEYJ562  | M 5.6K OHM J 1/10W  | R590    | ERDS1FJ184   | C 180K OHM J 1/2W   |
| R443    | ERJ6GEYJ333  | M 33K OHM J 1/10W   | R591    | ERJ6ENF1002  | M 10K OHM F 1/10W   |
| R444    | ERJ6GEYJ223  | M 22K OHM J 1/10W   | R592    | ERG3FJ273    | M 27K OHM J 3W      |
| R445    | ERJ6GEYJ333  | M 33K OHM J 1/10W   | R593    | ERJ6ENF1821  | M 1.82K OHM F 1/10W |
| R446    | ERJ6GEYJ332  | M 3.3K OHM J 1/10W  | R594    | ERDS2TJ682   | C 6.8K OHM J 1/4W   |
| R447    | ERJ6GEYJ333  | M 33K OHM J 1/10W   | R595    | EROS2CKF3161 | M 3.16K OHM F 1/4W  |
| R448    | ERJ6GEYJ562  | M 5.6K OHM J 1/10W  | R596    | EROS2CKF5361 | M 5.36K OHM F 1/4W  |
| R449    | ERJ6GEYJ333  | M 33K OHM J 1/10W   | R597    | ERDS2TJ121   | C 120 OHM J 1/4W    |
| R502    | ERJ6GEYJ333  | M 33K OHM J 1/10W   | R598    | ERDS1FJ1R8   | C 1.8 OHM J 1/2W    |
| R503    | ERJ8GCVJ682  | M 6.8K OHM J 1/8W   | R651    | ERO25CKF8251 | M 8.25K OHM F 1/4W  |
| R504    | ERJ6GEYOR00  | M 0 OHM 1/10W       | R652    | ERDS2TJ333   | C 33K OHM J 1/4W    |
| R505    | ERJ6GEYJ163  | M 16K OHM J 1/10W   | R654    | ERQ14AJ100   | F 10 OHM J 1/4W     |
| R506    | ERJ6GEYJ154  | M 150K OHM J 1/10W  | R655    | ERQ14AJ100   | F 10 OHM J 1/4W     |
| R507    | ERJ6ENF1242  | M 12.4K OHM F 1/10W | R656    | ERJ6ENF3482  | M 34.8K OHM F 1/10W |
| R508    | ERJ6ENF2322  | M 23.2K OHM F 1/10W | R657    | ECUX1C1052FX | C 1UF Z 16V         |
| R509    | ERJ6ENF7501  | M 7.5K OHM F 1/10W  | R658    | ERJ6ENF1002  | M 10K OHM F 1/10W   |
| R510    | ERJ6GEYJ152  | M 1.5K OHM J 1/10W  | R659    | ERQ14AJ100   | F 10 OHM J 1/4W     |
| R511    | ERJ6GEYJ334  | M 330K OHM J 1/10W  | R669    | ERJ6GEYJ682  | M 6.8K OHM J 1/10W  |
| R512    | ERJ6GEYJ100  | M 10 OHM J 1/10W    | R670    | ERX3FJX1R0D  | M 1 OHM J 3W        |
| R514    | ERD25FJ392K  | C 3.9K OHM J 1/4W   | R671    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W  |
| R515    | ERDS2TJ392   | C 3.9K OHM J 1/4W   | R672    | ERJ6GEYJ562  | M 5.6K OHM J 1/10W  |
| R517    | ERJ6GEYJ821  | M 820 OHM J 1/10W   | R673    | ERJ6GEYJ392  | M 3.9K OHM J 1/10W  |
| R521    | ERJ6GEYJ473  | M 47K OHM J 1/10W   | R674    | ERDS2TJ102   | C 1K OHM J 1/4W     |
| R522    | ERJ6GEYJ124  | M 120K OHM J 1/10W  | R675    | ERQ14AJ100   | F 10 OHM J 1/4W     |
| R523    | ERJ6GEYJ474  | M 470K OHM J 1/10W  | R676    | ERDS2TJ104   | C 100K OHM J 1/4W   |
| R524    | ERJ6GEYJ101  | M 100 OHM J 1/10W   | R677    | ERX3FJX1R0D  | M 1 OHM J 3W        |
| R525    | ERG2SJ121    | M 120 OHM J 2W      | R678    | ERG1SJ332    | M 3.3K OHM J 1W     |
| R526    | ERDS1FJ470   | C 47 OHM J 1/2W     | R680    | ERDS2TJ102   | C 1K OHM J 1/4W     |
| R527    | ERDS2TJ332   | C 3.3K OHM J 1/4W   | R681    | ERDS2TJ104   | C 100K OHM J 1/4W   |
| R528    | ERG1SJ561    | M 560 OHM J 1W      | R682    | ERDS2TJ823   | C 82K OHM J 1/4W    |
| R530    | ERJ6GEYJ562  | M 5.6K OHM J 1/10W  | R683    | ERDS2TJ562   | C 5.6K OHM J 1/4W   |
| R539    | ERJ6GEYJ102  | M 1K OHM J 1/10W    | R684    | ERJ6GEYJ124  | M 120K OHM J 1/10W  |
| R543    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W  | R693    | ERJ6GEYJ154  | M 150K OHM J 1/10W  |
| R544    | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R694    | ERJ6GEYJ333  | M 33K OHM J 1/10W   |
| R545    | ERJ6GEYJ822  | M 8.2K OHM J 1/10W  | R695    | ERJ6GEYK825  | M 8.2M OHM K 1/10W  |
| R546    | ERJ6GEYJ153  | M 15K OHM J 1/10W   | R696    | ERDS1FJ274   | C 270K OHM J 1/2W   |

| Ref.No. | Part No.     | Description        | Ref.No. | Part No.     | Description         |
|---------|--------------|--------------------|---------|--------------|---------------------|
| R697    | ERJ12NF3903  | M 390K OHM F 1/2W  | R858    | ERJ6ENF2002  | M 20K OHM F 1/10W   |
| R698    | ERJ6ENF2202  | M 22K OHM F 1/8W   | R859    | ERJ6ENF2321  | M 2.32K OHM F 1/10W |
| R699    | EROS2CKF3403 | M 340K OHM F 1/4W  | R861    | ERQ12AJR12HK | F 0.12 OHM J 1/2W   |
| R701    | ERJ6GEYJ333  | M 33K OHM J 1/10W  | R863    | ERQ12AJR33HK | F 0.33 OHM J 1/2W   |
| R702    | ERJ6GEYJ333  | M 33K OHM J 1/10W  | R864    | ERQ12AJR12HK | F 0.12 OHM J 1/2W   |
| R707    | ERJ6GEYJ103  | M 10K OHM J 1/10W  | R865    | ERQ12AJR12HK | F 0.12 OHM J 1/2W   |
| R715    | ERJ6GEYJ101  | M 100 OHM J 1/10W  | R867    | ERDS2TJ102   | C 1K OHM J 1/4W     |
| R716    | ERDS2TJ101   | C 100 OHM J 1/4W   | R868    | ERD25FJ271K  | C 270 OHM J 1/4W    |
| R717    | ERJ6GEYJ153  | M 15K OHM J 1/10W  | R869    | ERD25FJ271K  | C 270 OHM J 1/4W    |
| R718    | ERJ6GEYJ103  | M 10K OHM J 1/10W  | R870    | ERQ12AJR33HK | F 0.33 OHM J 1/2W   |
| R719    | ERJ6GEYJ103  | M 10K OHM J 1/10W  | R871    | ERDS2TJ102   | C 1K OHM J 1/4W     |
| R720    | ERJ6GEYJ683  | M 68K OHM J 1/10W  | R872    | ERD25FJ271K  | C 270 OHM J 1/4W    |
| R721    | ERJ6GEYJ683  | M 68K OHM J 1/10W  | R873    | ERJ6ENF1102  | M 11K OHM F 1/10W   |
| R722    | ERJ6GEYJ333  | M 33K OHM J 1/10W  | R874    | ERJ6ENF1102  | M 11K OHM F 1/10W   |
| R723    | ERJ6GEYJ104  | M 100K OHM J 1/10W | R875    | ERDS1FJ151   | C 150 OHM J 1/2W    |
| R724    | ERJ6GEYJ104  | M 100K OHM J 1/10W | R876    | ERJ6ENF3321  | M 3.32K OHM F 1/10W |
| R725    | ERJ8GCVJ122  | M 1.2K OHM J 1/8W  | R877    | ERDS2TJ102   | C 1K OHM J 1/4W     |
| R726    | ERJ6GEYJ102  | M 1K OHM J 1/10W   | R878    | ERJ6ENF6191  | M 6.19K OHM F 1/10W |
| R727    | TAR103J0102H | M 1K OHM J 1/10W   | R879    | ERJ6ENF1621  | M 1.62K OHM F 1/10W |
| R728    | ERJ6GEYJ103  | M 10K OHM J 1/10W  | R880    | ERJ6ENF1331  | M 1.33K OHM F 1/10W |
| R729    | ERJ6GEYJ104  | M 100K OHM J 1/10W | R881    | ERJ6ENF11B1  | M 1.18K OHM F 1/10W |
| R751    | ERJ6GEYJ333  | M 33K OHM J 1/10W  | R882    | ERG1SJ103    | M 10K OHM J 1W      |
| R752    | ERJ6GEYJ223  | M 22K OHM J 1/10W  | R883    | ERD25CKF2742 | M 27.4K OHM F 1/4W  |
| R770    | ERJ6GEYJ272  | M 2.7K OHM J 1/10W | R884    | ERJ6ENF1781  | M 1.78K OHM F 1/10W |
| R771    | ERJ6GEYJ332  | M 3.3K OHM J 1/10W | R885    | ERJ6GEYJ103  | M 10K OHM J 1/10W   |
| R772    | ERJ6GEYJ274  | M 270K OHM J 1/10W | R886    | ERDS1FJ122   | C 1.2K OHM J 1/2W   |
| R801    | ERC12AGK394  | S 390K OHM K 1/2W  | R887    | ERDS1FJ123   | C 12K OHM J 1/2W    |
| R802    | ERT06ZFL120P | HERMISTOR          | R888    | ERJ6GEYJ392  | M 3.9K OHM J 1/10W  |
| R821    | ERDS1FJ224   | C 220K OHM J 1/2W  | R892    | ERJ6GEYJ223  | M 22K OHM J 1/10W   |
| R822    | ERDS1FJ224   | C 220K OHM J 1/2W  | R893    | ERDS2TJ332   | C 3.3K OHM J 1/4W   |
| R823    | EROS2CKF8202 | M 82K OHM F 1/4W   | R894    | ERDS2TJ391   | C 390 OHM J 1/4W    |
| R824    | ERDS2TJ470   | C 47 OHM J 1/4W    | R895    | ERDS2TJ104   | C 100K OHM J 1/4W   |
| R825    | ERW2PKR22    | M 0.22 OHM K 2W    | R896    | ERJ6GEYJ103  | M 10K OHM J 1/10W   |
| R826    | ERQ3FJ104    | M 100K OHM J 3W    | R897    | ERD25FJ332K  | C 3.3K OHM J 1/4W   |
| R827    | ERQ12AJR7    | F 4.7 OHM J 1/2W   | R898    | ERJ6ENF3321  | M 3.32K OHM F 1/10W |
| R828    | ERDS1FJ274   | C 270K OHM J 1/2W  | R899    | ERG1SJ102    | M 1K OHM J 1W       |
| R829    | ERDS2TJ223   | C 22K OHM J 1/4W   | R901    | AP102Q9RO    | POSISTOR            |
| R830    | ERG2SJ333    | M 33K OHM J 2W     | R902    | ERDS1FJ103   | C 10K OHM J 1/2W    |
| R831    | ERDS1FJ334   | C 330K OHM J 1/2W  | R903    | ERJ6GEYJ102  | M 1K OHM J 1/10W    |
| R832    | ERDS2TJ224   | C 220K OHM J 1/4W  | R946    | ERQ14AJ100   | F 10 OHM J 1/4W     |
| R833    | ERDS2TJ224   | C 220K OHM J 1/4W  | R951    | ERJ6ENF6042  | M 60.4K OHM F 1/10W |
| R834    | ERG2SJ333    | M 33K OHM J 2W     | R952    | ERJ6ENF6982  | M 69.8K OHM F 1/10W |
| R835    | ERW2PKR22    | M 0.22 OHM K 2W    | R953    | ERJ6ENF3742  | M 37.4K OHM F 1/10W |
| R836    | ERD25FJ223K  | C 22K OHM J 1/4W   | R954    | ERJ6GEYJ681  | M 680 OHM J 1/10W   |
| R837    | ERQ14AJ330   | F 33 OHM J 1/4W    | R955    | ERJ6GEYJ102  | M 1K OHM J 1/10W    |
| R839    | ERDS2TJ222   | C 2.2K OHM J 1/4W  | R956    | ERJ6ENF1741  | M 1.74K OHM F 1/10W |
| R840    | ERDS2TJ222   | C 2.2K OHM J 1/4W  | R957    | ERJ6ENF3321  | M 3.32K OHM F 1/10W |
| R841    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W | R958    | ERJ6GEYJ272  | M 2.7K OHM J 1/10W  |
| R842    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W | R959    | ERJ6GEYJ272  | M 2.7K OHM J 1/10W  |
| R843    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W | R960    | ERDS2TJ2R7   | C 2.7 OHM J 1/4W    |
| R844    | ERJ6GEYJ122  | M 1.2K OHM J 1/10W | R1001   | EROS2CKF75RO | M 75 OHM F 1/4W     |
| R845    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W | R1002   | ERDS2TJ330   | C 33 OHM J 1/4W     |
| R846    | ERD25FJ561K  | C 560 OHM J 1/4W   | R1003   | ERJ8GCVJ391  | M 390 OHM J 1/8W    |
| R847    | ERJ6GEYJ472  | M 4.7K OHM J 1/10W | R1005   | ERJ6GEYJ563  | M 56K OHM J 1/10W   |
| R848    | ERG1SJ223    | M 22K OHM J 1W     | R1031   | ERD25FJ681K  | C 680 OHM J 1/4W    |
| R849    | ERJ6GEYJ103  | M 10K OHM J 1/10W  | R1052   | ERDS2TJ102   | C 1K OHM J 1/4W     |
| R850    | ERDS2TJ103   | C 10K OHM J 1/4W   | R1053   | ERDS1FJ330   | C 33 OHM J 1/2W     |
| R851    | ERJ6GEYOROC  | M 0 OHM J 1/10W    | R1054   | ERDS2TJ224   | C 220K OHM J 1/4W   |
| R852    | ERJ6GEYJ102  | M 1K OHM J 1/10W   | R1055   | ERDS2TJ224   | C 220K OHM J 1/4W   |
| R853    | ERD25FJ122K  | C 1.2K OHM J 1/4W  | R1056   | ERDS2TJ223   | C 22K OHM J 1/4W    |
| R854    | ERDS2TJ103   | C 10K OHM J 1/4W   | R1057   | ERJ6GEYJ103  | M 10K OHM J 1/10W   |
| R857    | ERQ14AJR68   | F 0.68 OHM J 1/4W  | R1058   | ERDS2TJ103   | C 10K OHM J 1/4W    |

| Ref.No. | Part No.     | Description         | Ref.No.         | Part No.         | Description          |
|---------|--------------|---------------------|-----------------|------------------|----------------------|
| R1059   | ERJ6GEYJ470  | M 47 OHM J 1/10W    | R1367           | EROS2CKF1653     | M 165K OHM F 1/4W    |
| R1060   | ERG1SJ103    | M 10K OHM J 1W      | R1368           | ERDS2TJ103       | C 10K OHM J 1/4W     |
| R1061   | TAR114J0151H | F 150 OHM J 1/10W   | R1369           | ERDS2TJ182       | C 1.8K OHM J 1/4W    |
| R1101   | EROS2CKF75R0 | M 75 OHM F 1/4W     | R1370           | ERDS2TJ185       | C 1.8M OHM J 1/4W    |
| R1102   | ERDS2TJ330   | C 33 OHM J 1/4W     | R1371           | ERDS1FJ103       | C 10K OHM J 1/2W     |
| R1103   | ERJ8GCVJ391  | M 390 OHM J 1/8W    | R1380           | ERJ6GEYJ152      | M 1.5K OHM J 1/10W   |
| R1105   | ERJ6GEYJ563  | M 56K OHM J 1/10W   | R1381           | ERJ6GEYJ472      | M 4.7K OHM J 1/10W   |
| R1151   | ERD25FJ681K  | C 680 OHM J 1/4W    | R1382           | ERJ6ENF2001      | M 2K OHM F 1/10W     |
| R1152   | ERDS2TJ102   | C 1K OHM J 1/4W     | R1383           | ERDS2TJ683       | C 68K OHM J 1/4W     |
| R1153   | ERDS1FJ330   | C 33 OHM J 1/2W     | R1384           | ERDS1FJ125       | C 1.2M OHM J 1/2W    |
| R1154   | ERDS2TJ224   | C 220K OHM J 1/4W   | R1385           | ERJ8GCVJ222      | M 2.2K OHM J 1/8W    |
| R1155   | ERDS2TJ224   | C 220K OHM J 1/4W   | R1387           | ERJ6GEYJ100      | M 10 OHM J 1/10W     |
| R1156   | ERDS2TJ223   | C 22K OHM J 1/4W    | R1401           | ERJ6GEYJ101      | M 100 OHM J 1/10W    |
| R1157   | ERJ6GEYJ103  | M 10K OHM J 1/10W   | R1402           | ERD25FJ203K      | C 20K OHM J 1/4W     |
| R1158   | ERDS2TJ103   | C 10K OHM J 1/4W    | R1403           | ERJ6ENF6041      | M 6.04K OHM F 1/10W  |
| R1159   | ERJ6GEYJ470  | M 47 OHM J 1/10W    | R1404           | ERJ6ENF2742      | M 27.4K OHM F 1/10W  |
| R1160   | ERG1SJ103    | M 10K OHM J 1W      | R1406           | ERJ6GEYJ331      | M 330 OHM J 1/10W    |
| R1161   | TAR114J0121H | F 120 OHM J 1/10W   | R1407           | ERJ6GEYJ331      | M 330 OHM J 1/10W    |
| R1201   | EROS2CKF75R0 | M 75 OHM F 1/4W     | R1408           | ERJ6GEYJ103      | M 10K OHM J 1/10W    |
| R1202   | ERDS2TJ330   | C 33 OHM J 1/4W     | R1409           | ERJ6GEYJ103      | M 10K OHM J 1/10W    |
| R1203   | ERJ8GCVJ391  | M 390 OHM J 1/8W    | OTHERS          |                  |                      |
| R1205   | ERJ6GEYJ563  | M 56K OHM J 1/10W   | THTF001         | SCREW            |                      |
| R1251   | ERD25FJ681K  | C 680 OHM J 1/4W    | TMKKO25         | MICA SHEET       |                      |
| R1252   | ERDS2TJ102   | C 1K OHM J 1/4W     | TUC87574        | AC INLET BRACKET |                      |
| R1253   | ERDS1FJ330   | C 33 OHM J 1/2W     | XTV3+12J        | SCREW            |                      |
| R1254   | ERDS2TJ224   | C 220K OHM J 1/4W   | XTV3+8J         | SCREW            |                      |
| R1255   | ERDS2TJ224   | C 220K OHM J 1/4W   | XWG3F10         | WASHER           |                      |
| R1256   | ERDS2TJ223   | C 22K OHM J 1/4W    | F888            | TSFX15A352       | FUSE(3.5A)           |
| R1257   | ERJ6GEYJ103  | M 10K OHM J 1/10W   | F889            | TSF89102         | FUSE(1.0A)           |
| R1258   | ERDS2TJ103   | C 10K OHM J 1/4W    | FG1             | TJEA013          | EARTH TERMINAL       |
| R1259   | ERJ6GEYJ470  | M 47 OHM J 1/10W    | FG3             | TJC85341         | EARTH LUG            |
| R1260   | ERG1SJ103    | M 10K OHM J 1W      | FG4             | TJC85341         | EARTH LUG            |
| R1261   | TAR114J0331H | F 330 OHM J 1/10W   | FG5             | TJC85341         | EARTH LUG            |
| R1301   | ERJ6ENF2152  | M 21.5K OHM F 1/10W | FG6             | TJC85341         | EARTH LUG            |
| R1302   | ERJ6ENF5111  | M 5.11K OHM F 1/10W | FG7             | TJC85341         | EARTH LUG            |
| R1304   | ERD25FJ101K  | C 100 OHM J 1/4W    | FG8             | TJC85341         | EARTH LUG            |
| R1305   | ERD25FJ101K  | C 100 OHM J 1/4W    | F5801           | TJC85502T        | FUSE HOLDER          |
| R1307   | ERJ6GEYJ103  | M 10K OHM J 1/10W   | F5802           | TJC85502T        | FUSE HOLDER          |
| R1309   | ERJ6GEYJ331  | M 330 OHM J 1/10W   | N101            | EMCSO451ML       | 4P CONNECTOR(L-TYPE) |
| R1310   | ERJ6GEYJ123  | M 12K OHM J 1/10W   | N150            | TJSF10220        | 20P CONNECTOR        |
| R1311   | ERDS1FJ123   | C 12K OHM J 1/2W    | N151            | TJSF10220        | 20P CONNECTOR        |
| R1331   | ERJ6GEYJ103  | M 10K OHM J 1/10W   | N152            | TJSF10220        | 20P CONNECTOR        |
| R1332   | ERJ6GEYOR00  | M 0 OHM J 1/10W     | N201            | TJS118620        | 5P CONNECTOR         |
| R1333   | ERJ6ENF1002  | M 10K OHM F 1/10W   | △ N801          | TJS8A9361        | AC SOCKET            |
| R1334   | ERJ6ENF1002  | M 10K OHM F 1/10W   | N940            | EMCSO264M        | 2P CONNECTOR         |
| R1335   | ERDS2TJ562   | C 5.6K OHM J 1/4W   | N951            | TJS118590        | 2P CONNECTOR         |
| R1336   | ERJ6GEYJ223  | M 22K OHM J 1/10W   | N1001           | TJS118640        | 7P CONNECTOR         |
| R1338   | ERJ6GEYJ473  | M 47K OHM J 1/10W   | N1002           | TXAJTV8P159      | 8P CONNECTOR ASSY    |
| R1339   | ERJ6GEYJ103  | M 10K OHM J 1/10W   | N1002ATJS118650 | 8P CONNECTOR     |                      |
| R1340   | ERJ6GEYJ331  | M 330 OHM J 1/10W   | N1003           | TXAJTV11P015     | 11P CONNECTOR ASSY   |
| R1341   | ERJ6GEYJ822  | M 8.2K OHM J 1/10W  | N1003ATJS118680 | 11P CONNECTOR    |                      |
| R1342   | ERJ6GEYJ472  | M 4.7K OHM J 1/10W  | △ N1004         | TJS8A5130        | CRT SOCKET           |
| R1343   | ERJ6GEYJ182  | M 1.8K OHM J 1/10W  | N1005           | TJC85342T        | LUG TERMINAL         |
| R1345   | ERJ6GEYJ102  | M 1K OHM J 1/10W    | N1006           | TJCD003          | TERMINAL             |
| R1346   | ERJ6GEYJ153  | M 15K OHM J 1/10W   | N1007           | TJC85342T        | LUG TERMINAL         |
| R1347   | ERJ8GCVJ101  | M 100 OHM J 1/8W    | N501-1TEL302-9  | TERMINAL         |                      |
| R1361   | ERDS1FJ151   | C 150 OHM J 1/2W    | N501-2TEL302-9  | TERMINAL         |                      |
| R1362   | ERJ6GEYJ154  | M 150K OHM J 1/10W  | N501-3TEL302-9  | TERMINAL         |                      |
| R1363   | ERJ6GEYJ154  | M 150K OHM J 1/10W  | N501-4TEL302-9  | TERMINAL         |                      |
| R1364   | EROS2CKF1502 | M 15K OHM F 1/4W    | N901-1TEL302-9  | TERMINAL         |                      |
| R1365   | ERG1SJ182    | M 1.8K OHM J 1W     | N901-2TEL302-9  | TERMINAL         |                      |
| R1366   | ERJ6GEYJ222  | M 2.2K OHM J 1/10W  |                 |                  |                      |

## SAFETY PRECAUTIONS

### 1 CAUTION:

No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar with all of the following safety checks and servicing guide lines.

### 2 SAFETY CHECK

Care should be taken while servicing this CRT display because of the high voltage used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

### 3 FIRE & SHOCK HAZARD

3-1 Insert an isolation transformer between the CRT display and AC power line before servicing the chassis.

3-2 In servicing pay attention to original lead dress especially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.

3-3 All the protective devices must be reinstalled per original design.

3-4 Soldering must be inspected for possible cold solder joints, frayed leads, damaged insulation, solder splashes or sharp solder points. Be certain to remove all foreign material.

### 4 LEAKAGE CURRENT COLD CHECK

4-1 Unplug the AC cord and connect a jumper between the two prongs on the plug.

4-2 Turn the CRT display power switch "on".

4-3 Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metallic part on the CRT display such as the metal frame, screwheads, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be 1.8 megohm minimum.

### 5 LEAKAGE CURRENT HOT CHECK

5-1 Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during this check.

5-2 Connect a 1500 ohm, 10 watt resistor, paralleled by a 0.15 $\mu$ F capacitor between each exposed metallic part and a good earth ground (as shown in Fig.1).

5-3 Use an AC voltmeter with 1000 ohm/volt or more sensitivity and measure the AC voltage across the combination 1500 ohm resistor and 0.15 $\mu$ F capacitor.

5-4 Move the resistor connection to each exposed metallic part and measure the voltage.

5-5 Reverse the polarity of the AC plug in the AC outlet and repeat the above measurement.

5-6 Voltage measured must not exceed 7.5 volt RMS, from any exposed metallic part to ground. A leakage current tester may be used in the above hot check, in which case any current measured must not exceed 5.0 milliamp. In the case of a measurement exceeding the 5.0 milliamp value, a rework is required to eliminate the chance of a shock hazard.

*Note: High voltage is present when this CRT display is*

*operating. Always discharge the anode of the picture tube to the display chassis to prevent shock hazard.*

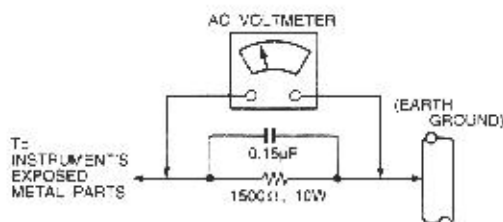


Fig.1

### 6 IMPLOSION PROTECTION

Picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation. Use only Panasonic replacement picture tubes.

### 7 X-RADIATION

**WARNING :** The only potential source of X-Radiation is the picture tube. However when the high voltage circuitry is operating properly there is no possibility of X-Radiation problem. The basic precaution which must be exercised is to keep the high voltage at the following factory-recommended level.

*Note: It is important to use an accurate periodically calibrated high voltage meter.*

7-1 The procedure for adjustment high voltage is as shown on page 15.

7-2 If can not be adjust 25.0 kV at immediate service is required to prevent the possibility of premature component failure.

7-3 To prevent X-Radiation possibility it is essential to use the specified picture tube.

### IMPORTANT SAFETY NOTICE

There are special components used in this CRT displays which are important for safety. These parts are identified by the international symbol  $\Delta$  on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacture's specified parts to prevent X-RADIATION, shock, fire or other hazards. Do not modify the original design or this will void the original parts and labor guarantee.

## GENERAL INFORMATION

### 1. OUTLINE

V773 is 17 inch multi-scan color CRT display with the following nice features.

OSD (on screen display) Control is newly introduced, which allows easy User adjustment.

### 2. FEATURES

#### 2-1 Power Saving

Built in Power Saving function based on VESA-DPMS standard.

Power energy shall be saved by controlling the circuit in accordance with power save signal from computer.

#### 2-2 OSD (on screen display) function

OSD (5 languages) is new and excellent man-machine interface.

Anyone is able to set up the picture as he like through OSD menu.

#### 2-3 Self Test function

Self testing picture comes out by pushing any key in the case of no-connection with computer or power saving operation.

This function shows if monitor is alive or not and can be used for self aging test.

#### 2-4 Ergonomic design

- Low emission design to meet MPR II & TCO'92
- ESF (Electro static field) free coating on CRT

#### 2-5 Multi scan with digital technology

- 8 bit micro computer controls the circuit operation to meet with wide range signal of  $f_H = 30 \sim 69$  kHz and  $f_V = 50 \sim 160$  Hz. So VGA640x350, VGA640x400, VGA640x480, SVGA800x600, 1024x768 and 1280x1024 mode are applicable.

#### 2-6 1 Factory presets, (+ 7 Reservation), 13 user memories.

- 1 standard mode is preset at the factory.
- 7 modes are reserved at the factory.
- 13 user memories are available to set the users own timing and display information.

#### 2-7 Flat Face and line dot pitch

- Flat face CRT with a fine dot pitch of 0.27 mm gives a comfortable sight of the screen.

#### 2-8 Superior display performance

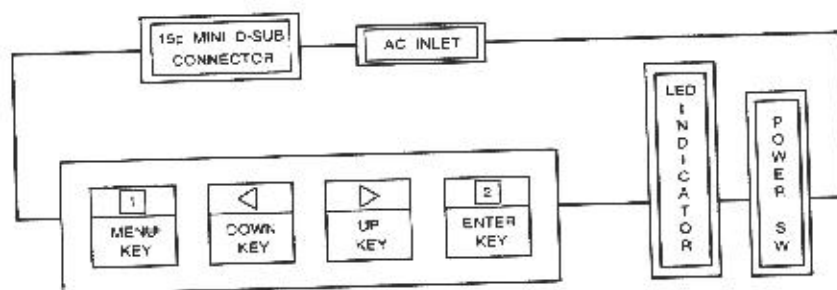
- Good focus by sophisticated gun and dynamic focus circuit
- High contrast
- Minimized distortion by correction circuit
- Good convergence
- Users enjoy full scan image for graphick

#### 2-9 Special function

- VESA DDC1/2B (Display Data Channel) compatible
- Rotation control circuit

## SPECIFICATION

### 1. DIAGRAM



1.1 POWER SW, LED, [1]-key (MENU), <-key (DOWN), >-key (UP), and [2]-key (ENTER) are located on the front panel.

1.2 Signal cable and AC inlet are located on the back side of the cabinet.

1.3 OSD menu includes the following function.

|            |               |              |
|------------|---------------|--------------|
| CONTRAST   | BRIGHTNESS    | DEGAUSS      |
| RECALL     | H POSITION    | H SIZE       |
| V POSITION | V SIZE        | V PINCUSHION |
| TRAPEZOID  | PARALLELOGRAM | ROTATION     |

COLOR SELECT

VIDEO INPUT LEVEL

DISPLAY FREQUENCY

LANGUAGES

※) CONTRAST can be directly controlled with </>-key.

※) With sync signal, OSD menu appears by pushing [1]-key.

Without sync signal, self test menu appears by pushing [1]-key.

## 2. MECHANICAL SPECIFICATIONS

..... refer to the attached drawing

- 2.1 Dimension    Height : 416 mm (16.4") (typ.)  
                          Width : 410 mm (16.1") (typ.)  
                          Depth : 441 mm (17.4") (typ.)

- 2.2 Net Weight : 17.5 kg (38.6 lbs) (typ.)

- 2.3 Maximum Viewable Phosphor Display Area  
                          406.4 mm (16.0") (typ.)

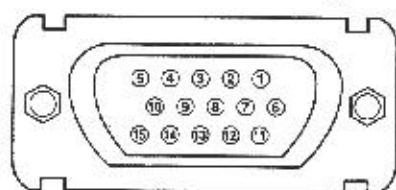
## 3. CONNECTORS

- 3.1 Signal connector:

\*5P Mini D-Sub cable (un-detachable)

- 3.2 AC inlet: CEE 22 typed connector

<15P Mini D-Sub Pin assignment>



- 1 ... RED                      6 ... GROUND    11 ... GROUND  
 2 ... GREEN                7 ... GROUND    12 ... SDA (DDC)  
 3 ... BLUE                  8 ... GROUND    13 ... H SYNC.  
 4 ... GROUND               9 ... - (OPEN)   14 ... V. SYNC.  
 5 ... GROUND (DDC)    10 ... GROUND   15 ... SCL (DDC)

## 4. CRT SPECIFICATIONS

|                    |                                                                                                                                        |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Part No.           | M41LLK27X402                                                                                                                           |
| Type               | 17", 90°, 29z, in-line gun (15.5" Viewable)                                                                                            |
| Dot Pitch          | 0.26 mm                                                                                                                                |
| Phosphor           | R, G, B Short Persistence (Hi-Eu RED)                                                                                                  |
| CIE Color point:   | Red x: 0.625 (± 0.015) y: 0.340 (± 0.015)<br>Green x: 0.290 (± 0.015) y: 0.595 (± 0.015)<br>Blue x: 0.150 (± 0.015) y: 0.063 (± 0.015) |
| Guns               | SEMI TINT                                                                                                                              |
| Face               | ARECS                                                                                                                                  |
| Total Transmission | 42.5 %                                                                                                                                 |

## 5. ELECTRICAL SPECIFICATIONS

- 5.1 Standard conditions ... Except special items

|                       |                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------|
| Display image         | Green, full "H" characters with a border line. (7 x 9 dots)<br>Video signal : 100% duty<br>Display area : 300 mm x 225 mm |
| Video signal level    | 0.7 V pp                                                                                                                  |
| Contrast, Brightness  | Contrast : Max. Brightness : detent point                                                                                 |
| Ambient Temperature   | 20±5°C (68 ± 9°F)                                                                                                         |
| Input Voltage         | AC 120 V, 60 Hz or AC 220 V, 50 Hz                                                                                        |
| Terrestrial magnetism | Vertical field : northern hemisphere field 40µT (southern hemisphere field -40µT)<br>Horizontal field : no field          |
| Viewing direction     | Parallel to the CRT axis                                                                                                  |
| Measurements          | After an initial warming up time of more than 30 minutes.                                                                 |
| Ambient light         | 200 ± 50 lx                                                                                                               |
| Display mode          | 1024 x 768 (60.02 kHz, 75.03 Hz)                                                                                          |

## 5.2 POWER

- 5.2.1 Power supply ... Commercial power source

|                          |                               |
|--------------------------|-------------------------------|
| Input voltage            | AC 90 - 132 V, AC 198 - 264 V |
| Power frequency          | 50 Hz ± 3 Hz, 60 Hz ± 3 Hz    |
| Input current            | 2.0 A Max. (100 V)            |
| Inrush current (at 20°C) | 40 A op                       |
| Power consumption        | 110 W (Typ.)                  |

- 5.2.2 Power Management for Power Saving ...

Power saving system is designed based upon VESA DPMS standard (Version : 1.0)

- 1) Power consumption and recovery time.

| APM State   | SIGNALS               |                       |           | MONITOR POWER CONSUMPTION | RECOVERY TIME TO ON STATE | INDICATOR |
|-------------|-----------------------|-----------------------|-----------|---------------------------|---------------------------|-----------|
|             | H. Sync               | V. Sync               | V. DEO    |                           |                           |           |
| ON          | *3 NCR-MAL            | *3 NOR-MAL            | *2 ACTIVE | *4 100%                   | —                         | Green     |
| *5 STAND-BY | No Sync or *5 < 6 kHz | > 40 Hz               | BLANK     | < 30 W                    | < 4s                      | Yellow    |
| SUSPEND     | > 10 kHz              | No Sync or *5 < 20 Hz | BLANK     | < 30 W                    | < 4s                      | Yellow    |
| OFF         | No Sync or *5 < 6 kHz | No Sync or *5 < 20 Hz | BLANK     | < 6 W                     | < 20s                     | Yellow    |

\*\* The transition time from ON state to each APM state is 5 seconds minimum.

\*1 : APM : Advanced Power Management.

\*2 : Means. Condition of power consumption for ON state.

DISPLAY IMAGE : WHITE full "H" characters with a border line (7 x 9 dots).

\*3 : NORMAL : See "5.3 ACCEPTABLE TIMING".

\*4 : Power Consumption is measured at AC 100-240V.

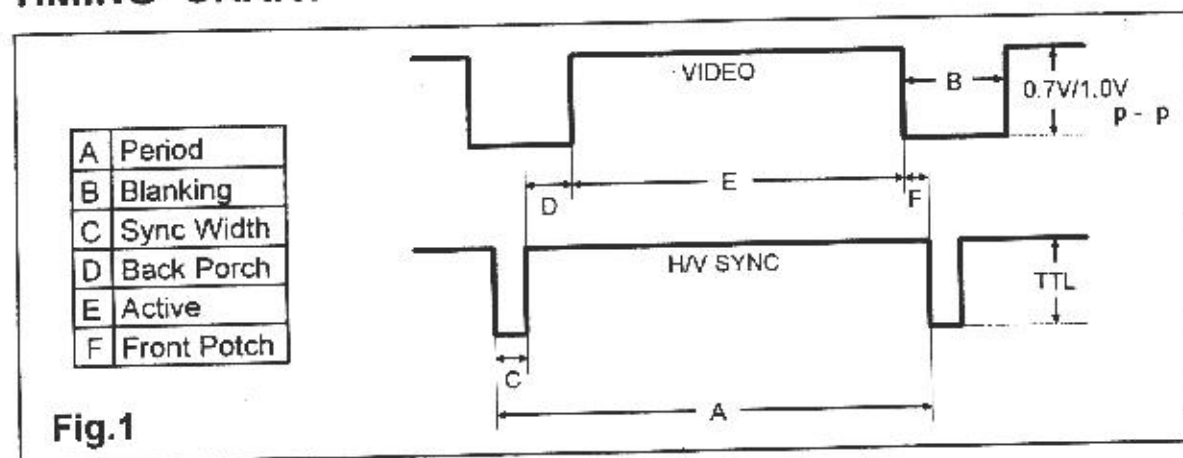
\*5 : Power saving operation is done at least less than specified value in the list.

\*6 : Micro controller will supply SUSPEND signal at this mode.

## 5.3 Standard timing (Standard mode)

- Following 1 mode is preset in the memory as standard timing at the factory and 7 modes are reserved.
- Fig-1 shows a definition of timing and signal level.
- Electrical performance is specified This SPECIFICATION is specified at STD (1024 x 768) mode unless otherwise mentioned

# TIMING CHART



|                    |                   | PRESET                   | RESERVATION             | RESERVATION             |
|--------------------|-------------------|--------------------------|-------------------------|-------------------------|
|                    |                   | MODE - 1                 | MODE - 2                | MODE - 3                |
|                    |                   | 1024 × 768 (75)          | 640 × 480 (60)          | 640 × 480 (75)          |
| DOT CLOCK          |                   | 78.7500 MHz              | 25.1745 MHz             | 31.5000 MHz             |
| f H                |                   | 60.0229 kHz              | 31.4681 kHz             | 37.5000 kHz             |
| H                  | A - PERIOD        | 16.660 μs ( 1,312 dots ) | 31.778 μs ( 800 dots )  | 26.667 μs ( 840 dots )  |
|                    | B - BLANKING TIME | 3.657 μs ( 288 dots )    | 6.356 μs ( 160 dots )   | 6.349 μs ( 200 dots )   |
|                    | C - SYNC WIDTH    | 1.219 μs ( 96 dots )     | 3.813 μs ( 96 dots )    | 2.032 μs ( 64 dots )    |
|                    | D - BACK PORCH    | 2.235 μs ( 176 dots )    | 1.946 μs ( 49 dots )    | 3.810 μs ( 120 dots )   |
|                    | E - ACTIVE TIME   | 13.003 μs ( 1,024 dots ) | 25.423 μs ( 640 dots )  | 20.317 μs ( 640 dots )  |
|                    | F - FRONT PORCH   | 0.203 μs ( 16 dots )     | 0.596 μs ( 15 dots )    | 0.508 μs ( 16 dots )    |
| f V                |                   | 75.0286 Hz               | 59.9393 Hz              | 75.0000 Hz              |
| V                  | A - PERIOD        | 13.328 ms ( 800 lines )  | 16.684 ms ( 525 lines ) | 13.333 ms ( 500 lines ) |
|                    | B - BLANKING TIME | 0.533 ms ( 32 lines )    | 1.430 ms ( 45 lines )   | 0.533 ms ( 20 lines )   |
|                    | C - SYNC WIDTH    | 0.050 ms ( 3 lines )     | 0.064 ms ( 2 lines )    | 0.080 ms ( 3 lines )    |
|                    | D - BACK PORCH    | 0.466 ms ( 28 lines )    | 1.176 ms ( 37 lines )   | 0.427 ms ( 16 lines )   |
|                    | E - ACTIVE TIME   | 12.795 ms ( 768 lines )  | 15.254 ms ( 480 lines ) | 12.800 ms ( 480 lines ) |
|                    | F - FRONT PORCH   | 0.017 ms ( 1 lines )     | 0.191 ms ( 6 lines )    | 0.027 ms ( 1 lines )    |
| SYNC POLARITY(H/V) |                   | Positive / Positive      | Negative / Negative     | Negative / Negative     |

|                    |                   | RESERVATION              | RESERVATION              | RESERVATION              |
|--------------------|-------------------|--------------------------|--------------------------|--------------------------|
|                    |                   | MODE - 4                 | MODE - 5                 | MODE - 6                 |
|                    |                   | 800 × 600 (75)           | MAC 832 × 624            | 1024 × 768 (70)          |
| DOT CLOCK          |                   | 49.5000 MHz              | 57.2832 MHz              | 75.0000 MHz              |
| f H                |                   | 46.8750 kHz              | 49.7250 kHz              | 56.4759 kHz              |
| H                  | A - PERIOD        | 21.333 μs ( 1,056 dots ) | 20.111 μs ( 1,152 dots ) | 17.707 μs ( 1,328 dots ) |
|                    | B - BLANKING TIME | 5.172 μs ( 256 dots )    | 5.586 μs ( 320 dots )    | 4.053 μs ( 304 dots )    |
|                    | C - SYNC WIDTH    | 1.616 μs ( 80 dots )     | 1.117 μs ( 64 dots )     | 1.813 μs ( 136 dots )    |
|                    | D - BACK PORCH    | 3.232 μs ( 160 dots )    | 3.910 μs ( 224 dots )    | 1.920 μs ( 144 dots )    |
|                    | E - ACTIVE TIME   | 16.162 μs ( 800 dots )   | 14.524 μs ( 832 dots )   | 13.653 μs ( 1,024 dots ) |
|                    | F - FRONT PORCH   | 0.323 μs ( 16 dots )     | 0.559 μs ( 32 dots )     | 0.320 μs ( 24 dots )     |
| f V                |                   | 75.0000 Hz               | 74.5502 Hz               | 70.0694 Hz               |
| V                  | A - PERIOD        | 13.333 ms ( 625 lines )  | 13.414 ms ( 667 lines )  | 14.272 ms ( 806 lines )  |
|                    | B - BLANKING TIME | 0.533 ms ( 25 lines )    | 0.865 ms ( 43 lines )    | 0.673 ms ( 38 lines )    |
|                    | C - SYNC WIDTH    | 0.064 ms ( 3 lines )     | 0.060 ms ( 3 lines )     | 0.106 ms ( 6 lines )     |
|                    | D - BACK PORCH    | 0.448 ms ( 21 lines )    | 0.784 ms ( 39 lines )    | 0.513 ms ( 29 lines )    |
|                    | E - ACTIVE TIME   | 12.800 ms ( 600 lines )  | 12.549 ms ( 624 lines )  | 13.599 ms ( 768 lines )  |
|                    | F - FRONT PORCH   | 0.021 ms ( 1 lines )     | 0.020 ms ( 1 lines )     | 0.053 ms ( 3 lines )     |
| SYNC POLARITY(H/V) |                   | Positive / Positive      | Negative / Negative      | Negative / Negative      |

|                    |                   | RESERVATION                   | RESERVATION                   |
|--------------------|-------------------|-------------------------------|-------------------------------|
|                    |                   | MODE - 7                      | MODE - 8                      |
|                    |                   | MAC 1024 × 768                | 1280 × 1024 (60)              |
| DOT CLOCK          |                   | 80.0000 MHz                   | 108.0000 MHz                  |
| H                  | f H               | 60.2410 KHz                   | 63.9810 KHz                   |
|                    | A - PERIOD        | 16.600 $\mu$ s ( 1,328 dots ) | 15.630 $\mu$ s ( 1,688 dots ) |
|                    | B - BLANKING TIME | 3.800 $\mu$ s ( 304 dots )    | 3.778 $\mu$ s ( 408 dots )    |
|                    | C - SYNC WIDTH    | 1.200 $\mu$ s ( 96 dots )     | 1.037 $\mu$ s ( 112 dots )    |
|                    | D - BACK PORCH    | 2.200 $\mu$ s ( 176 dots )    | 2.296 $\mu$ s ( 248 dots )    |
|                    | E - ACTIVE TIME   | 12.800 $\mu$ s ( 1,024 dots ) | 11.852 $\mu$ s ( 1,280 dots ) |
|                    | F - FRONT PORCH   | 0.400 $\mu$ s ( 32 dots )     | 0.444 $\mu$ s ( 48 dots )     |
| V                  | f V               | 74.9266 Hz                    | 60.0197 Hz                    |
|                    | A - PERIOD        | 13.346 ms ( 804 lines )       | 16.661 ms ( 1,066 lines )     |
|                    | B - BLANKING TIME | 0.598 ms ( 36 lines )         | 0.656 ms ( 42 lines )         |
|                    | C - SYNC WIDTH    | 0.050 ms ( 3 lines )          | 0.047 ms ( 3 lines )          |
|                    | D - BACK PORCH    | 0.498 ms ( 30 lines )         | 0.594 ms ( 38 lines )         |
|                    | E - ACTIVE TIME   | 12.749 ms ( 768 lines )       | 16.005 ms ( 1,024 lines )     |
|                    | F - FRONT PORCH   | 0.050 ms ( 3 lines )          | 0.016 ms ( 1 lines )          |
| SYNC POLARITY(H/V) |                   | Negative / Negative           | Positive / Positive           |

|                    |                   | ADJUSTMENT                  | ADJUSTMENT                    | ADJUSTMENT                    |
|--------------------|-------------------|-----------------------------|-------------------------------|-------------------------------|
|                    |                   | HV7 - 1                     | HV7 - 2                       | HV7 - 3                       |
| DOT CLOCK          |                   | 22.6000 MHz                 | 40.2479 MHz                   | 64.0400 MHz                   |
| H                  | f H               | 29.5039 KHz                 | 38.9999 KHz                   | 53.9966 KHz                   |
|                    | A - PERIOD        | 33.894 $\mu$ s ( 766 dots ) | 25.641 $\mu$ s ( 1,032 dots ) | 18.520 $\mu$ s ( 1,186 dots ) |
|                    | B - BLANKING TIME | 8.496 $\mu$ s ( 192 dots )  | 3.926 $\mu$ s ( 158 dots )    | 4.497 $\mu$ s ( 288 dots )    |
|                    | C - SYNC WIDTH    | 4.115 $\mu$ s ( 93 dots )   | 1.491 $\mu$ s ( 60 dots )     | 1.718 $\mu$ s ( 110 dots )    |
|                    | D - BACK PORCH    | 2.788 $\mu$ s ( 63 dots )   | 2.336 $\mu$ s ( 94 dots )     | 2.186 $\mu$ s ( 140 dots )    |
|                    | E - ACTIVE TIME   | 25.398 $\mu$ s ( 574 dots ) | 21.715 $\mu$ s ( 874 dots )   | 14.022 $\mu$ s ( 898 dots )   |
|                    | F - FRONT PORCH   | 1.593 $\mu$ s ( 36 dots )   | 0.099 $\mu$ s ( 4 dots )      | 0.593 $\mu$ s ( 38 dots )     |
| V                  | f V               | 48.0520 Hz                  | 77.0749 Hz                    | 105.0518 Hz                   |
|                    | A - PERIOD        | 20.811 ms ( 614 lines )     | 12.974 ms ( 506 lines )       | 9.519 ms ( 514 lines )        |
|                    | B - BLANKING TIME | 0.915 ms ( 27 lines )       | 0.744 ms ( 29 lines )         | 0.482 ms ( 26 lines )         |
|                    | C - SYNC WIDTH    | 0.102 ms ( 3 lines )        | 0.103 ms ( 4 lines )          | 0.037 ms ( 2 lines )          |
|                    | D - BACK PORCH    | 0.712 ms ( 21 lines )       | 0.513 ms ( 20 lines )         | 0.352 ms ( 19 lines )         |
|                    | E - ACTIVE TIME   | 19.896 ms ( 587 lines )     | 12.231 ms ( 477 lines )       | 9.038 ms ( 488 lines )        |
|                    | F - FRONT PORCH   | 0.102 ms ( 3 lines )        | 0.128 ms ( 5 lines )          | 0.093 ms ( 5 lines )          |
| SYNC POLARITY(H/V) |                   | Negative / Negative         | Negative / Negative           | Negative / Negative           |

|                    |                   | ADJUSTMENT                    |
|--------------------|-------------------|-------------------------------|
|                    |                   | HV7 - 4                       |
| DOT CLOCK          |                   | 93.4300 MHz                   |
| H                  | f H               | 69.9850 KHz                   |
|                    | A - PERIOD        | 14.289 $\mu$ s ( 1,335 dots ) |
|                    | B - BLANKING TIME | 3.329 $\mu$ s ( 311 dots )    |
|                    | C - SYNC WIDTH    | 1.092 $\mu$ s ( 102 dots )    |
|                    | D - BACK PORCH    | 1.820 $\mu$ s ( 170 dots )    |
|                    | E - ACTIVE TIME   | 10.960 $\mu$ s ( 1,024 dots ) |
|                    | F - FRONT PORCH   | 0.417 $\mu$ s ( 39 dots )     |
| V                  | f V               | 165.0590 Hz                   |
|                    | A - PERIOD        | 6.058 ms ( 424 lines )        |
|                    | B - BLANKING TIME | 0.457 ms ( 32 lines )         |
|                    | C - SYNC WIDTH    | 0.043 ms ( 3 lines )          |
|                    | D - BACK PORCH    | 0.343 ms ( 24 lines )         |
|                    | E - ACTIVE TIME   | 5.601 ms ( 392 lines )        |
|                    | F - FRONT PORCH   | 0.071 ms ( 5 lines )          |
| SYNC POLARITY(H/V) |                   | Negative / Negative           |

## 5.4 Acceptable timing

- If your timing is within following specification, this CRT display can automatically function with a certain size and position.

Horizontal: Sync frequency: 30.0 ~ 69.0 kHz  
 Blanking Time:  $\geq 3.4 \mu\text{s}$   
 Back Porch:  $\geq 1.25 \mu\text{s}$   
 Front Porch:  $\leq$  Back Porch  
 Sync Width:  $\geq 1.2 \mu\text{s}$

Vertical: Sync frequency: 50.0 ~ 160.0 Hz  
 Blanking Time:  $\geq 0.5 \text{ ms}$   
 Back Porch:  $\geq 0.4 \text{ ms}$   
 Sync Width:  $\geq 0.045 \text{ ms}$

- Several items like size, position and distortion can be adjusted through OSD menu, and if you want to keep it, please push the key [I] for memory, or keep the key untouched for about 20 seconds, it is automatically memorized.

NOTE: In case of RECALL, the key is untouched for about 30 seconds, RECALL function will be cancelled.

Please note, however, that there is the case you can not get the size and/or position you want, (for example, in case Display video Time is too short, you can't get bigger size of the image.)

- The CRT adopted in this CRT display is designed to minimize the moire phenomenon at suitable size for typical display modes. However, there might be a display format among many formats, in which the moire phenomenon appears on this display.

## 5.5 Signal level and input impedance

### 5.5.1 Video Signal level

- This CRT display is adjusted at the factory using 0.7Vpp Video Signal. Black level is 0 V.
- This CRT display is compatible with 1.0Vpp Video signal by using Video input level selection.

### 5.5.2 Sync Signal level

- H/V Separate, H/V Mixed : TTL level
- Sync on Green : 0.3 V p-p  $\pm 0.015\text{V}$

### 5.5.3 Input impedance

- Video input: 75  $\Omega$
- Sync input:  $\geq 1 \text{ k}\Omega$

## 5.6 Display performance

### 5.6.1 Display area

#### 1) PRESET TIMING

##### MODE 1

WIDTH : 300 mm  $\pm 5 \text{ mm}$

HEIGHT : 225 mm  $\pm 5 \text{ mm}$

#### 2) RESERVATION TIMING

##### MODE 2-7

WIDTH : 300 mm  $\pm 7 \text{ mm}$

HEIGHT : 225 mm  $\pm 7 \text{ mm}$

##### MODE 8

286 mm  $\pm 7 \text{ mm}$

229 mm  $\pm 7 \text{ mm}$

### 5.6.2 Centering

#### 1) PRESET TIMING (MODE1)

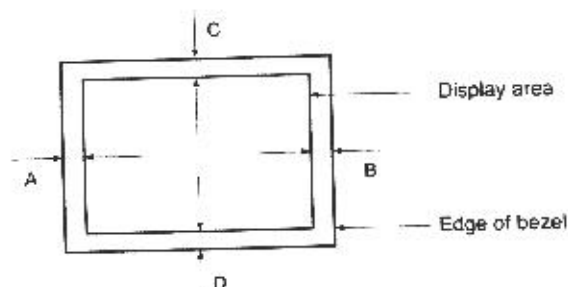
$|A - B| \leq 4 \text{ mm}$

$|C - D| \leq 4 \text{ mm}$

#### 2) RESERVATION TIMING (MODE2-8)

$|A - B| \leq 7 \text{ mm}$

$|C - D| \leq 7 \text{ mm}$



### 5.6.3 Distortion

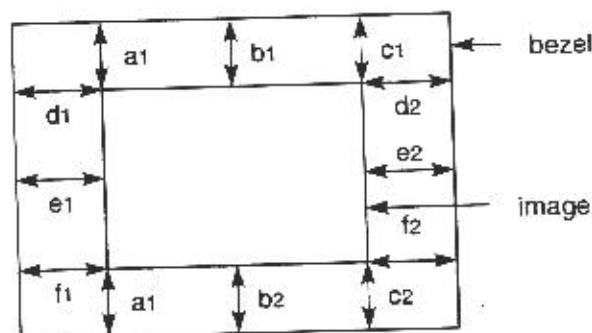
#### Combined distortion

$|a1 - b1|, |b1 - c1|, |c1 - a1| \leq 2.5 \text{ mm}$

$|a2 - b2|, |b2 - c2|, |c2 - a2| \leq 2.5 \text{ mm}$

$|d1 - e1|, |e1 - f1|, |f1 - d1| \leq 2.5 \text{ mm}$

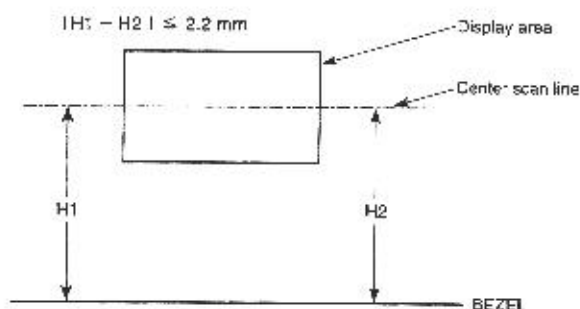
$|d2 - e2|, |e2 - f2|, |f2 - d2| \leq 2.5 \text{ mm}$



- Test condition : 7.1 Standard Condition
- Image Size : 300 x 225 mm
- User control : AS Shipped

#### 5.6.4 Rotation

$$|H1 - H2| \leq 2.5 \text{ mm} \\ \leq 0 \text{ mm (after user adjustment)}$$



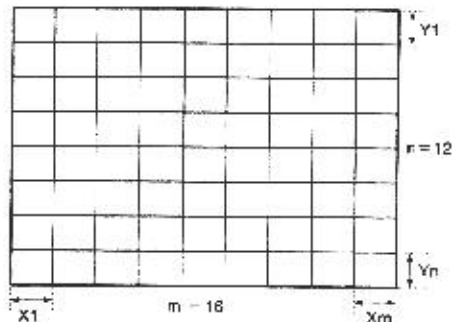
#### 5.6.5 Linearity

Horizontal linearity

$$= \frac{X_{\max} - X_{\min}}{X_{\max} + X_{\min}} \times 100\% \leq 6\% (48 - 64 \text{ kHz}) \\ \leq 7\% (\text{except above frequency range})$$

Vertical linearity

$$= \frac{Y_{\max} - Y_{\min}}{Y_{\max} + Y_{\min}} \times 100\% \leq 5\% (60 - 75 \text{ Hz}) \\ \leq 6\% (\text{except above frequency range})$$



#### <Conditions>

Display image ----- crosshatch pattern

Maximum and minimum values should not be adjacent to each other.

X max. is maximum value among X1~Xm

X min. is minimum value among X1~Xm

Y max. is maximum value among Y1~Yn

Y min. is minimum value among Y1~Yn

#### 5.7 General performance

##### 5.7.1 Video output

|           |               |
|-----------|---------------|
| Bandwidth | 86 MHz (Typ.) |
|-----------|---------------|

##### 5.7.2 Maximum luminance

|            |                                                                                                                                                                                                            |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Value      | 130 cd/m <sup>2</sup> (Typ.) for 5% white field at the center of the display area.<br>103 cd/m <sup>2</sup> (Typ.) for 100% white field at the center of the display area.<br>Specified by 9300 K + 8 MPCD |
| Conditions | Display image : White full flat field<br>Luminance : Max. (Contrast : Max.)<br>(Brightness : CENTER point)                                                                                                 |

##### 5.7.3 Minimum luminance

|            |                                                                                                            |
|------------|------------------------------------------------------------------------------------------------------------|
| Value      | ≤ 26 cd/m <sup>2</sup> at the center of the display area.<br>Specified by 9300 K + 8 MPCD                  |
| Conditions | Display image : White full flat field<br>Luminance : Min. (Contrast : Min.)<br>(Brightness : CENTER point) |

#### 5.7.4 Brightness variation

|            |                                                                                                                                                                                                |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Value      | 70 % (Min.) Variation = $C/A \times 100$                                                                                                                                                       |
| Conditions | Display image : White full flat field<br>Luminance : MAX (Contrast : MAX)<br>(Brightness : Detent point)<br>A : Luminance at center position<br>C : Luminance at position of lowest brightness |

#### 5.7.5 Display area regulation

|                     | Display area variation | Range of variation                             |
|---------------------|------------------------|------------------------------------------------|
| Due to Luminance    | within 1.0 %           | 26-103 cd/m <sup>2</sup><br>(white flat field) |
| Due to Power Supply | within 0.5 %           | AC : 90 - 132 V<br>or 198 - 264 V              |
| Due to Temperature  | within 1.0 %           | 20° C ± 20° C                                  |

#### 5.7.6 Color Point

< Conditions >

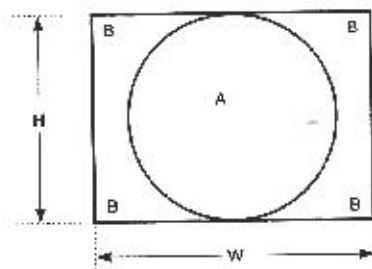
Display image : White flat field at the center of the display area.

Luminance : Brightness Detent point.

| Contrast: | max                                                               | min                                                               |
|-----------|-------------------------------------------------------------------|-------------------------------------------------------------------|
| Value     | 9300 K + 8 MPCD<br>$x = 0.283 \pm 0.020$<br>$y = 0.298 \pm 0.020$ | 9300 K + 8 MPCD<br>$x = 0.283 \pm 0.020$<br>$y = 0.298 \pm 0.020$ |

#### 5.7.7 Misconvergence

Center area of display (A) : 0.3 mm (Max.)  
 Corner area of display (B) : 0.4 mm (Max.)



<Conditions>

Display image : Crosshatch pattern mixed with R, G and B colors.

Convergence gauge : KLEIN CM7AG or equivalent.

Display area : W x H 300 x 225 mm

#### 5.7.8 Purity

Conspicuous misfiring shall not be visible within display area at a distance of 60cm from CRT surface.

<Conditions>

Display image : Red/Green/Blue flat field

Luminance : Contrast max,  
Brightness CENTER

Display area : 300 x 225 mm

#### 5.7.9 White Uniformity

$x_a - x_c \leq \pm 0.015$

$y_a - y_c \leq \pm 0.015$

$x_a$  : x coordinate at the CRT center

$x_c$  : x coordinate at any other point

$y_a$  : y coordinate at the CRT center

$y_c$  : y coordinate at any other point

<Conditions>

Display image : White flat field

Luminance : 103 cd/m<sup>2</sup> at the center of display area

Display area : 300 x 225 mm

#### 5.7.10 Jitter

Invisible at a distance of 60 cm from CRT surface

### 6. ENVIRONMENTS

#### 6.1 Ambient temperature, humidity and altitude

|             | Operating                     | Storage and shipment           |
|-------------|-------------------------------|--------------------------------|
| Temperature | 0 ~ 40° C<br>(32 ~ 104° F)    | -20 ~ +60° C<br>(-4 ~ 140° F)  |
| Humidity    | 5 ~ 90 % *                    | 5 ~ 90 % *                     |
| Altitude    | 3,000 m (Max.)<br>(10,000 ft) | 12,000 m (Max.)<br>(40,000 ft) |

\* Non-condensation

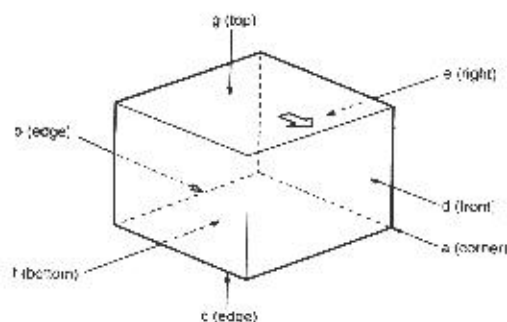
## 6.2 Vibration and shock

### 6.2.1 Vibration

|          | Order of tests | Direction of vibration |               | Acceleration                    |                                  | Frequency | Sweep   | Test time |
|----------|----------------|------------------------|---------------|---------------------------------|----------------------------------|-----------|---------|-----------|
|          |                |                        |               | Non-operation                   | Storage and shipment             |           |         |           |
| Unpacked | 1              | Vertical               | Up to down    | 2.9 m/s <sup>2</sup><br>(0.3 G) | 12.3 m/s <sup>2</sup><br>(1.0 G) | 5 - 55 Hz | 120 s   | 30 min.   |
|          | 2              |                        | Front to back |                                 |                                  |           |         |           |
|          | 3              |                        | Right to left |                                 |                                  |           |         |           |
| Packed   | 1              | Horizontal             | Up to down    | 7.4 m/s <sup>2</sup><br>(0.5 G) | 5 - 50 Hz                        | 810 s     | 40 min. |           |
|          | 2              |                        | Front to back |                                 |                                  |           |         |           |
|          | 3              |                        | Right to left |                                 |                                  |           |         |           |

### 6.2.2 Shock (Drop test)

| Unpacked | 20 G One time for each face (6 faces) (non-operation) |                                                     |        |                 |
|----------|-------------------------------------------------------|-----------------------------------------------------|--------|-----------------|
| Packed   | Order of drop                                         | Face to drop is to face the floor. (See the figure) | Height | Number of drop  |
|          | 1                                                     | a, b, c, d, e, g                                    | 60 cm  | 1 time for each |
|          | 2                                                     | f                                                   | 70 cm  |                 |



## 7. REGULATORY STANDARDS

### 7.1 Safety standards

Applicable standards

- UL 1950 : Listing
- CSA 22.2 No. 950 : Certification
- TÜV EN60950 (IEC-950) / GS (ZH1)
- NORDIC (SEMKO, NEMKO, DEMKO, FIMKO)
- Energy Star

### 7.2 X-Ray standards

Applicable standards

- DHHS, 21CFR subchapter J
- PTB : (Self Protected CRT)
- HC

### 7.3 EMC standards

Applicable standards

- VCCI class 2
- FCC part 15, subpart B, class B
- IC class B
- CISPR22 class B (EN55022)

CE Marking

<EMI test pattern>

White, full "H" characters (9 x 14 dots), block (12 x 24 dots)

## 8. POWER CORD

- Northern Hemisphere Version (North America and Japan)

... J/CSA approved power cord (Wall Type)

- European Version

... VDE approved power cord (PC Type)

## 9. SIGNAL CABLE

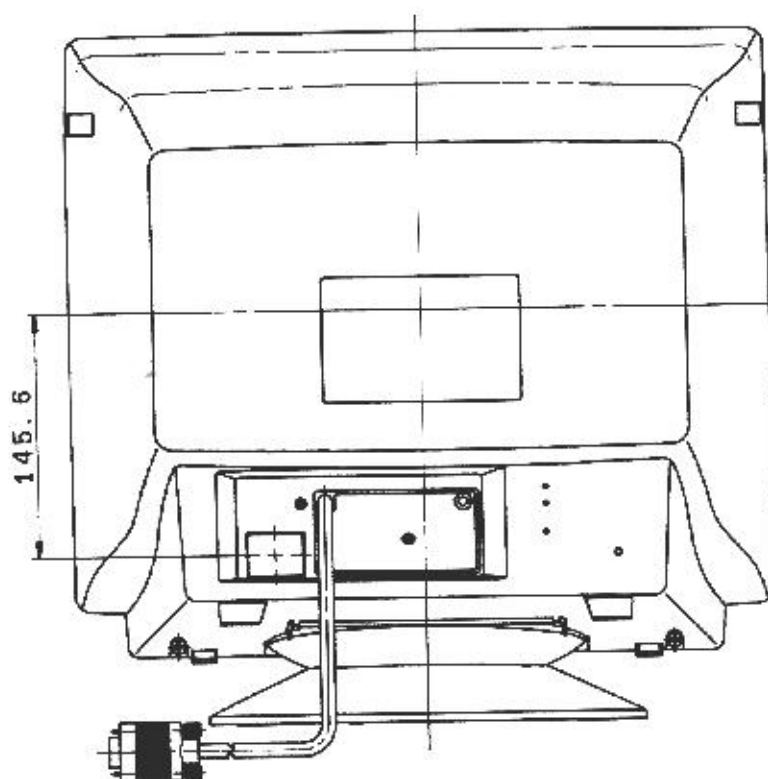
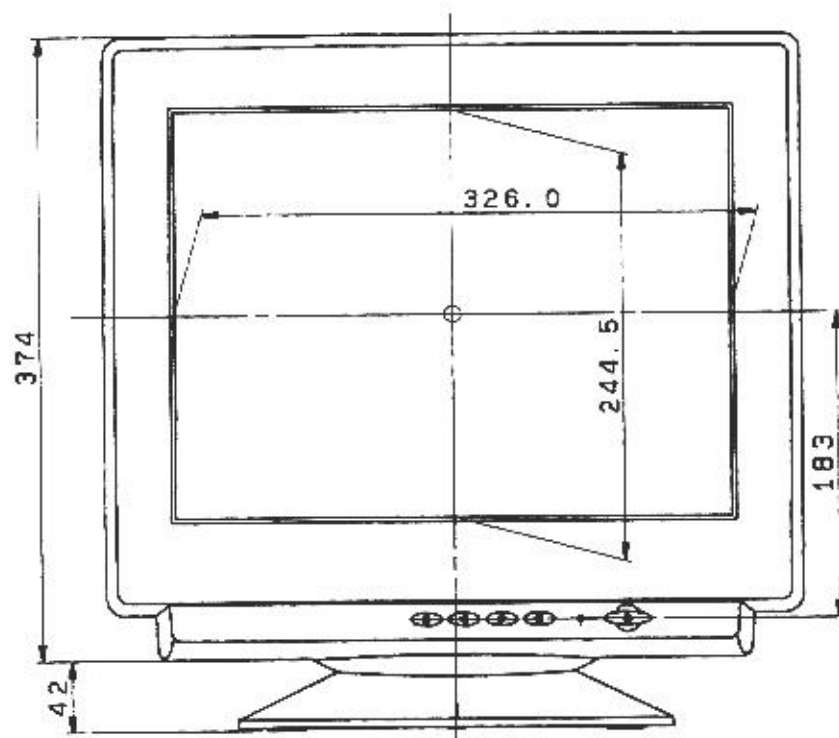
Un-detachable signal cable with Mini D-Sub 15P connectors is installed in the monitor.

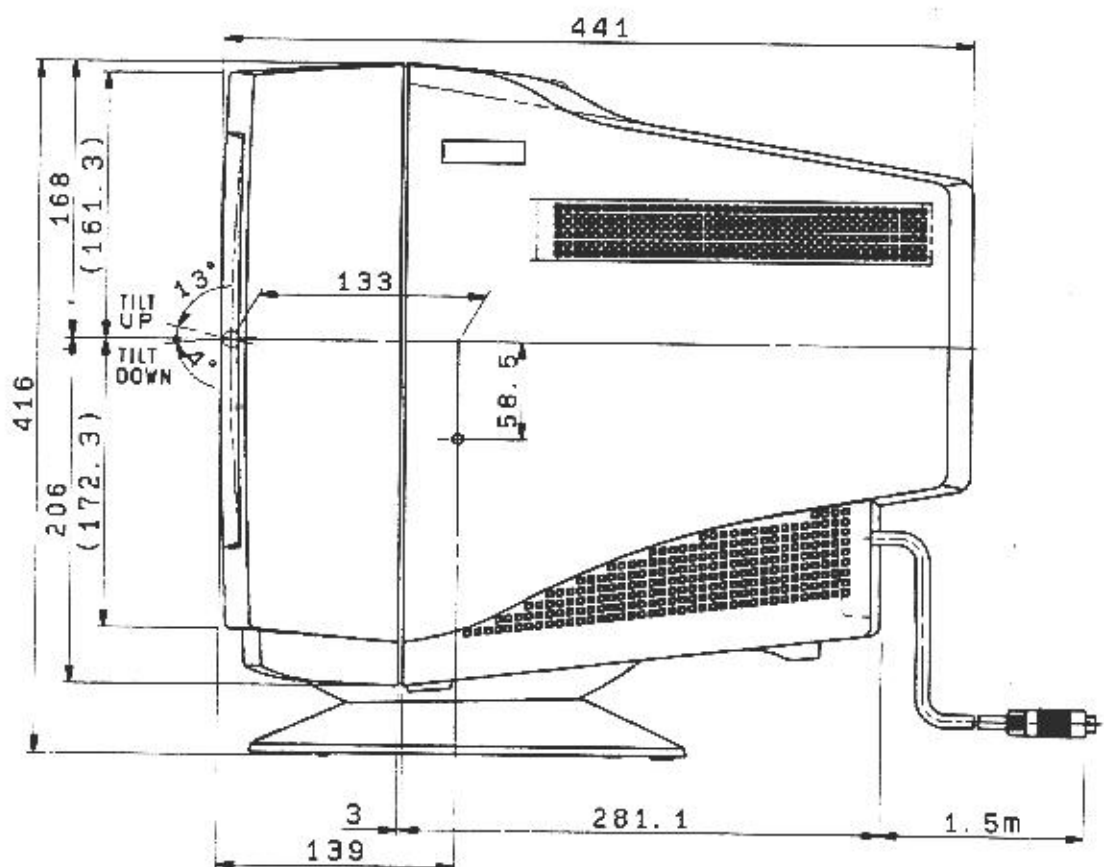
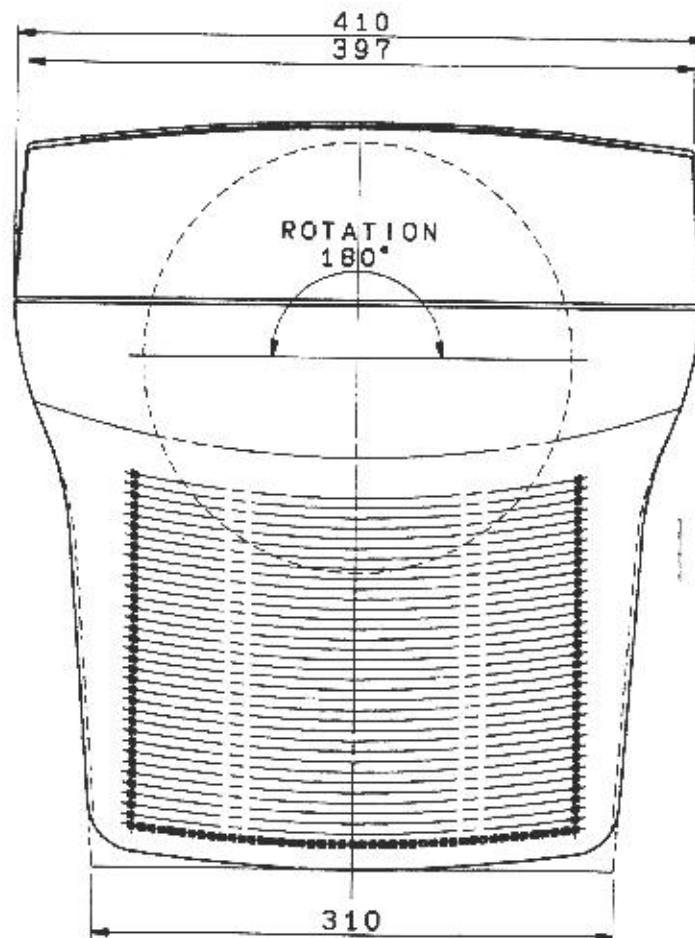
Length : 1.5 meter (4.93 feet)

## 10. RELIABILITY

> 55,000 hrs (demonstrated MTBF)

## DIMENSIONS





# REQUIRED ADJUSTMENT PROCEDURE AFTER A PARTS IS REPLACED (✓ IS REQUIRED)

| ADJUSTMENT ITEM              | REPLACED PARTS |               |                 |           |                            |                                                    |       |       |                      |              |               |                     |                       |       |       |       |       |
|------------------------------|----------------|---------------|-----------------|-----------|----------------------------|----------------------------------------------------|-------|-------|----------------------|--------------|---------------|---------------------|-----------------------|-------|-------|-------|-------|
|                              | MAIN<br>P.C.B. | CTL<br>P.C.B. | VIDEO<br>P.C.B. | CRT<br>DY | IC1301<br>IC1302<br>IC1401 | Q1051<br>Q1052<br>Q1151<br>Q1152<br>Q1251<br>Q1252 | IC401 | IC501 | Q673<br>Q674<br>Q675 | Q581<br>Q582 | IC521<br>Q521 | Q522<br>Q551<br>FBT | IC821<br>Q821<br>T821 | IC103 | IC104 | IC101 | IC802 |
| A DATA SETTING *             | ✓              | ✓             |                 |           |                            |                                                    |       |       |                      |              |               |                     |                       |       |       |       | ✓     |
| B +B ADJUST                  | ✓              | ✓             |                 |           |                            |                                                    |       |       |                      |              |               |                     | ✓                     |       |       |       | ✓     |
| C H. DRIVE DUTY              | ✓              | ✓             |                 |           |                            |                                                    |       | ✓     |                      |              |               |                     |                       |       | ✓     |       | ✓     |
| D H. DRIVE +B                | ✓              | ✓             |                 |           |                            |                                                    |       | ✓     | ✓                    |              | ✓             |                     |                       |       | ✓     |       | ✓     |
| E EHT                        | ✓              | ✓             |                 |           |                            |                                                    |       |       |                      | ✓            |               | ✓                   |                       |       |       |       | ✓     |
| F H. CENTER                  | ✓              | ✓             |                 |           |                            |                                                    |       |       |                      |              | ✓             | ✓                   |                       |       | ✓     |       | ✓     |
| G H.V. SIZE / POSI V.PCC (1) | ✓              | ✓             |                 |           |                            |                                                    | ✓     | ✓     |                      |              |               |                     |                       | ✓     |       |       | ✓     |
| H V. LIN (C)                 | ✓              | ✓             |                 |           |                            |                                                    | ✓     |       | ✓                    |              |               |                     |                       |       | ✓     |       | ✓     |
| I H.V. SIZE / POSI V.PCC (2) | ✓              | ✓             | ✓               | ✓         |                            | ✓                                                  |       |       |                      |              |               |                     |                       |       |       |       | ✓     |
| J BRIGHTNESS, COLOR          | ✓              | ✓             | ✓               |           | ✓                          |                                                    |       |       |                      |              |               |                     |                       |       |       |       | ✓     |
| K FOCUS                      | ✓              | ✓             |                 |           |                            |                                                    |       |       |                      |              |               |                     |                       |       |       |       | ✓     |
| L FINAL TUNE                 | ✓              | ✓             | ✓               | ✓         | ✓                          | ✓                                                  |       |       |                      |              |               |                     |                       |       |       |       | ✓     |
| M DATA SAVING                | ✓              | ✓             | ✓               | ✓         | ✓                          | ✓                                                  | ✓     | ✓     | ✓                    |              | ✓             | ✓                   | ✓                     | ✓     | ✓     | ✓     | ✓     |
| PURITY & CONVERGENCE         |                |               |                 | ✓         |                            |                                                    |       |       |                      |              |               |                     |                       |       |       |       |       |
| SCREEN CHECK                 | ✓              | ✓             | ✓               | ✓         | ✓                          | ✓                                                  | ✓     | ✓     | ✓                    | ✓            | ✓             | ✓                   | ✓                     | ✓     | ✓     | ✓     | ✓     |

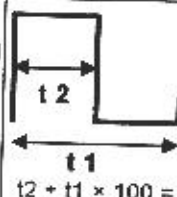
\* (A) DATA SETTING : Do not load standard data except when main PCB (With/CTL PCB) and IC902(EEPROM) are replaced.

CTL. PCB = Micro controller and DAC PCB.

# ADJUSTMENT PROCEDURE

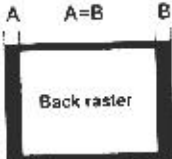
## 1. Description of Adjustment Method

| Program Menu Item |                                                                            | ◇ Test Meter<br>▼ Test Point<br>□ Pattern                                                                                                                                                                        | JOB CODE                   | Input Signal                                                                                                                                                                                           | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Adjusting Value                 |
|-------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| A                 | STANDARD DATA SETTING<br>1) Load data from FILE                            | ▼ D864 ~ GND<br>Refer to service adjustment control location on page 23                                                                                                                                          | A1<br>A2<br>A3<br>A4<br>AE |                                                                                                                                                                                                        | Do not connect the power and signal cable to monitor.<br>Apply 15V to D864 CATHODE and GND.<br>( Do not apply 5V to IC101. Because IC862 will supply the 5V and RESET signal to IC101 )<br><br>Set the cell to the program menu item at left and press .<br><br>A message<br>FILE -> EEPROM FILE NAME (q or Q escape) [] :<br>is displayed. So type in "DACDATA.DAT" (when using the standard data) and press .<br><br>Disconnect 15V cable, then turn on the power switch of the monitor. |                                 |
|                   | Do not load standard data except when Main P.C.B. and EEPROM are replaced. |                                                                                                                                                                                                                  |                            |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |
|                   | B                                                                          | +B ADJUST<br>◇ Digital voltmeter<br>▼ TP4 ~ GND<br>□ RGB OFF (SYNC ONLY)                                                                                                                                         | B1<br>B2                   | HV7-1                                                                                                                                                                                                  | Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz].<br>Make the adjustment to the value shown at right by turning the VR881 on the main PCB.                                                                                                                                                                                                                                                                                                                       | 80V ±0.5V                       |
|                   |                                                                            |                                                                                                                                                                                                                  |                            |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |
|                   | C                                                                          | H. DRIVE DUTY<br>2) Adjust VSR setting<br>◇ Oscilloscope<br>▼ TP3 ~ GND<br>□ Crosshatch<br><br><div>Oscilloscope Range</div> <div>HV7-1 10µs/div.<br/>HV7-2 5µs/div.<br/>HV7-3 5µs/div.<br/>HV7-4 2µs/div.</div> | C1<br>C2                   |                                                                                                                                                                                                        | Set the cell to the program menu item at left and press .<br>Set the cell to the adjusting mode INTP [0] and press .                                                                                                                                                                                                                                                                                                                                                                       | <br>t2<br>t1<br>t2 + t1 x 100 = |
| C3<br>C4<br>C5    |                                                                            |                                                                                                                                                                                                                  | HV7-1                      | Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz] and press .<br>Set the cell to H. DRIVE DUTY and press .<br>Make the adjustment to the value shown at right by using  and . | 53% ±3%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |
| C6                |                                                                            |                                                                                                                                                                                                                  |                            | Register by pressing  and return to program menu item of C2 by pressing .                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |
| C7<br>C8          |                                                                            |                                                                                                                                                                                                                  | HV7-2                      | Input signal [fH 39.0KHz] and [fV 77.1Hz]<br>Select Adjusting mode INTP [1], and repeat above (C3 ~ C6) procedures.                                                                                    | 51% ±3%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |
| C9<br>C10         |                                                                            |                                                                                                                                                                                                                  | HV7-3                      | Input signal [fH 54.0KHz] and [fV 105.0Hz]<br>Select Adjusting mode INTP [2], and repeat above (C3 ~ C6) procedures.                                                                                   | 48.5% ±3%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |
| C11<br>C12        |                                                                            |                                                                                                                                                                                                                  | HV7-4                      | Input signal [fH 70.0KHz] and [fV 165.0Hz]<br>Select Adjusting mode INTP [3], and repeat above (C3 ~ C6) procedures.                                                                                   | 46% ±3%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |
| CE                |                                                                            |                                                                                                                                                                                                                  |                            | Press  to return to main menu.                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |



Note 1 : Check to be sure that the program disk name is V773 before making necessary adjustment.

Note 2 : Unless otherwise specified, the monitor state is as given at right.

| Program Menu Item | <input type="checkbox"/> Test Meter<br><input type="checkbox"/> Test Point<br><input type="checkbox"/> Pattern                                                                     | JOB CODE | Input Signal | Operation                                                                             | Adjusting Value                                                                       |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| D                 | <b>H. DRIVE +B</b><br>2) Adjust VSR setting<br><br><input type="checkbox"/> Digital voltmeter<br><input type="checkbox"/> TP2 ~ GND<br><input type="checkbox"/> Crosshatch         | D1       | HV7-1        | Set the cell to the program menu item at left and press                               | 20.5V ±0.5V                                                                           |
|                   |                                                                                                                                                                                    | D2       |              | Set the cell to the adjusting mode <u>INTP [0]</u> and press                          |                                                                                       |
|                   |                                                                                                                                                                                    | D3       |              | Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz] and press  |                                                                                       |
|                   |                                                                                                                                                                                    | D4       |              | Set the cell to <u>H. DRIVE +B</u> and press                                          |                                                                                       |
|                   |                                                                                                                                                                                    | D5       |              | Make the adjustment to the value shown at right by using  and                         |                                                                                       |
|                   |                                                                                                                                                                                    | D6       |              | Register by press  and return to menu of D2 by press                                  |                                                                                       |
|                   |                                                                                                                                                                                    | D7       | HV7-2        | Input signal [fH 39.0KHz] and [fV 77.1Hz]                                             | 19.0V ±0.5V                                                                           |
|                   |                                                                                                                                                                                    | D8       |              | Select Adjusting mode <u>INTP [1]</u> , and repeat above (D3 ~ D6) procedures.        |                                                                                       |
|                   |                                                                                                                                                                                    | D9       | HV7-3        | Input signal [fH 54.0KHz] and [fV 105.0Hz]                                            | 17.0V ±0.5V                                                                           |
|                   |                                                                                                                                                                                    | D10      |              | Select Adjusting mode <u>INTP [2]</u> , and repeat above (D3 ~ D6) procedures.        |                                                                                       |
|                   |                                                                                                                                                                                    | D11      | HV7-4        | Input signal [fH 70.0KHz] and [fV 165.0Hz]                                            | 14.5V ±0.5V                                                                           |
|                   |                                                                                                                                                                                    | D12      |              | Select Adjusting mode <u>INTP [3]</u> , and repeat above (D3 ~ D6) procedures.        |                                                                                       |
|                   |                                                                                                                                                                                    | DE       |              | Press  to return to main menu.                                                        |                                                                                       |
| E                 | <b>EHT ADJUST</b><br>2) Adjust VSR setting<br><br><input type="checkbox"/> Digital voltmeter<br><input type="checkbox"/> TP1 ~ GND<br><input type="checkbox"/> RGB off (Sync only) | E1       | HV7-4        | Set the cell to the program menu item at left and press                               | 150.0V ±0.5V                                                                          |
|                   |                                                                                                                                                                                    | E2       |              | Set the cell to the adjusting mode <u>INTP[3]</u> and press                           |                                                                                       |
|                   |                                                                                                                                                                                    | E3       |              | Check that the input signal to the monitor is [fH 70.0KHz] and [fV 165.0Hz] and press |                                                                                       |
|                   |                                                                                                                                                                                    | E4       |              | Move the cell to <u>H. OUT +B</u> and press                                           |                                                                                       |
|                   |                                                                                                                                                                                    | E5       |              | Make adjustment to the value shown at right by using  and                             |                                                                                       |
|                   |                                                                                                                                                                                    | E6       |              | Register by pressing  and return to the main menu by pressing                         |                                                                                       |
|                   |                                                                                                                                                                                    | E7       |              | Set the cell to the program menu item at left and press                               |                                                                                       |
|                   |                                                                                                                                                                                    | E8       |              | Select the 6: <u>CALCULATE H.OUT +B</u> from the menu.                                |                                                                                       |
|                   |                                                                                                                                                                                    | E9       |              | This message will appear :<br><b>H +B Data Calculated . Hit Return Key !</b>          |                                                                                       |
| F                 | <b>H. CENTER</b><br><br><input type="checkbox"/> RGB off (Sync only)                                                                                                               | F1       | Mode-1       | Set the Brightness to MAX on the OSD.                                                 |  |
|                   |                                                                                                                                                                                    | F2       |              | Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz]            |                                                                                       |
|                   |                                                                                                                                                                                    | F3       |              | Make the adjustment as shown at right by turning the <b>VR581</b> on the main PCB.    |                                                                                       |
|                   |                                                                                                                                                                                    |          |              |                                                                                       | Set the raster to the center with respect to the bezel.                               |

| Program Menu Item                                             | ◇ Test Meter<br>▼ Test Point<br>□ Pattern | JOB CODE | Input Signal | Operation                                                                                                                                                                                                                                            | Adjusting Value                                                                                               |
|---------------------------------------------------------------|-------------------------------------------|----------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| H/V. SIZE, POSI and<br>V. PCC (1)<br>4) Adjust Factory preset | □ Crosshatch                              | G1       | Mode-1       | Set the cell to the program menu item at left and press $\leftarrow$ .                                                                                                                                                                               | H : 300mm $\pm$ 5<br>V : 225mm $\pm$ 5<br><br>H/V Posi : Center<br>V. PCC : Best point                        |
|                                                               |                                           | G2       |              | Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz] and press $\leftarrow$ .                                                                                                                                                  |                                                                                                               |
|                                                               |                                           | G3       |              | Set the cell to following items, press $\leftarrow$ and make the adjustments to the values shown at right by using $\leftarrow$ and $\rightarrow$ .                                                                                                  |                                                                                                               |
|                                                               |                                           | GE       |              | ① <u>H. SIZE</u><br>② <u>H. POSI</u><br>③ <u>V. SIZE</u><br>④ <u>V. POSI</u><br>⑤ <u>V. PCC</u><br>⑥ <u>V. PCC PARALLELOGRAM</u><br>⑦ <u>V. PCC TRAPEZOID</u><br>After adjustment, return to the main menu by using $\leftarrow$ and $\rightarrow$ . |                                                                                                               |
| V. LIN (C)<br>3) Adjust STD setting                           | □ Crosshatch                              | H1       | Mode-1       | Set the cell to the program menu item at left and press $\leftarrow$ .                                                                                                                                                                               |                                                                                                               |
|                                                               |                                           | H2       |              | Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz] and press $\leftarrow$ .                                                                                                                                                  |                                                                                                               |
|                                                               |                                           | H3       |              | Set the cell to <u>V. LIN C</u> and press $\leftarrow$ make the adjustment to the best point by using $\leftarrow$ and $\rightarrow$ .                                                                                                               |                                                                                                               |
|                                                               |                                           | HE       |              | After adjustment, return to the main menu by using $\leftarrow$ .                                                                                                                                                                                    |                                                                                                               |
| H/V. SIZE, POSI and<br>V. PCC (2)<br>2) Adjust VSR Setting    | □ Crosshatch                              | I1       | HV7-1        | Set the cell to the program menu item at left and press $\leftarrow$ .                                                                                                                                                                               | H : 300mm $\pm$ 5<br>V : 225mm $\pm$ 5<br><br>H/V Posi : Center<br>V. PCC : Best point<br>V. LIN : Best point |
|                                                               |                                           | I2       |              | Set the cell to the adjusting mode <u>INTP [0]</u> and press $\leftarrow$ .                                                                                                                                                                          |                                                                                                               |
|                                                               |                                           | I3       |              | Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz] and press $\leftarrow$ .                                                                                                                                                  |                                                                                                               |
|                                                               |                                           | I4       |              | Set the cell to following items, press $\leftarrow$ and make the adjustments to the values shown at right by using $\leftarrow$ and $\rightarrow$ .                                                                                                  |                                                                                                               |
|                                                               |                                           |          |              | ① <u>H. SIZE</u><br>② <u>H. POSI</u><br>③ <u>V. SIZE</u><br>④ <u>V. POSI</u><br>⑤ <u>V. PCC</u><br>⑥ <u>V. LIN (S)</u>                                                                                                                               |                                                                                                               |
|                                                               |                                           | I5       |              | After adjusting the above, return to menu of I2 by using $\leftarrow$ .                                                                                                                                                                              |                                                                                                               |
|                                                               |                                           | I6       | HV7-2        | Input signal [fH 39.0KHz] and [fV 77.1Hz]                                                                                                                                                                                                            |                                                                                                               |
|                                                               |                                           | I7       |              | Select Adjusting mode <u>INTP [1]</u> , and repeat above (I3 ~ I5) procedures.                                                                                                                                                                       |                                                                                                               |
|                                                               |                                           | I8       | HV7-3        | Input signal [fH 54.0KHz] and [fV 105.0Hz]                                                                                                                                                                                                           |                                                                                                               |
|                                                               |                                           | I9       |              | Select Adjusting mode <u>INTP [2]</u> , and repeat above (I3 ~ I5) procedures.                                                                                                                                                                       |                                                                                                               |
|                                                               |                                           | I10      | HV7-4        | Input signal [fH 70.0KHz] and [fV 165.0Hz]                                                                                                                                                                                                           |                                                                                                               |
|                                                               |                                           | I11      |              | Select Adjusting mode <u>INTP [3]</u> , and repeat above (I3 ~ I5) procedures.                                                                                                                                                                       |                                                                                                               |
|                                                               |                                           | IE       |              | After adjustment, return to the main menu by press $\leftarrow$ .                                                                                                                                                                                    |                                                                                                               |

| ITEM<br>Program Menu                          | ◇ Test Meter<br>▼ Test Point<br>□ Pattern                   | JOB<br>CODE                            | Input<br>Signal | Operation                                                                                                                                                                                                                                                                                                                                                      | Adjusting Value                                           |
|-----------------------------------------------|-------------------------------------------------------------|----------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>CRT CUT-OFF</b>                            | ◇ TV Color<br>Analyzer II<br>□ RGB Off<br>(Sync only)       | J1<br>J2                               | Mode-1          | Set the Contrast to MAX, Brightness to Center and Color is 9300k using the OSD.<br>Check that the input signal to the monitor is [fH 60.0KHz], [fV 75.0Hz] and turn off the RGB signal                                                                                                                                                                         |                                                           |
| 7) Special ADJUST<br>1: 9300K COLOR<br>Adjust |                                                             | J3<br>J4<br>J5<br>↓<br>J14             |                 | Set the cell to the menu at left and press $\leftarrow$<br>Select 1: 9300K COLOR Adjust from the menu.<br>Make the adjustment R,G and B Low Light by using $\leftarrow$ , $\rightarrow$ and Screen VR to CRT cut-off.<br><b>Please refer to flow chart for this adjustment on page 18.</b>                                                                     |                                                           |
| <b>BRIGHTNESS<br/>COLOR ADJUST</b>            | □ White window<br>(5cm×5cm at<br>center)                    | J15<br>J16                             |                 | Change to the pattern at left<br>Move the cell to the following items and make the adjustment to the value shown at right by using $\leftarrow$ and $\rightarrow$<br><u>R. SUB CONT 9300K</u><br><u>G. SUB CONT 9300K</u><br><u>B. SUB CONT 9300K</u>                                                                                                          | Y=130 cd/m <sup>2</sup><br>x=0.283 ±0.20<br>y=0.298 ±0.20 |
|                                               |                                                             | J17<br>J18                             |                 | Set Contrast to MIN using the OSD.<br>Move the cell to the following items and make the adjustment to the value shown at right by using $\leftarrow$ and $\rightarrow$<br><u>R. LOW LIGHT 9300K</u><br><u>G. LOW LIGHT 9300K</u><br><u>B. LOW LIGHT 9300K</u><br><b>Adjust two colors only out of above three as shown in J13 on page 18.</b>                  | x=0.283 ±0.20<br>y=0.298 ±0.20                            |
| <b>ABL</b>                                    | □ White flat field<br>(full window)                         | J19<br>J20<br>J21                      |                 | Change to the pattern at left<br>Move the cell to <u>ABL</u> and make the adjustment to the value shown at right by using $\leftarrow$ and $\rightarrow$ .<br>Press $\boxed{E}$ to return to menu of J4                                                                                                                                                        | Y=113 cd/m <sup>2</sup>                                   |
| <b>1.0V ADJUST</b>                            | □ White window<br>(5cm×5cm at<br>center)<br>1.0V p-p video* | J22<br>J23<br>J24<br>J25<br>J26<br>J27 |                 | Change to the pattern at left.*<br>Set the cell to the menu at left and press $\leftarrow$ .<br>Select the <u>4 VIDEO 1.0Vpp ADJUST</u> from the menu.<br>Set Input Video Level 1.0V using the OSD of the monitor.<br>Make the adjustment to the value shown at right by using $\leftarrow$ and $\rightarrow$ .<br>Press $\leftarrow$ to return to menu of J24 | Y=130 cd/m <sup>2</sup>                                   |
| <b>DATA SETTING</b>                           |                                                             | J28<br>JE                              |                 | Select the <u>7: BRIGHTNESS LIMIT SETTING</u> from the menu.<br>Press $\leftarrow$ to return to menu of J28 and Press $\boxed{E}$ to return to the main menu.                                                                                                                                                                                                  |                                                           |

Should make Final Tune after this adjustment refer to item L on page 19.

# WARNING

Do not turn the screen VR after this adjustment.

# CRT CUT-OFF ADJUSTMENT

J5 Set Screen-VR fully counterclockwise (Min).

J6 Set data value to "95" for R, G, B Low Light

J7 Set data value to "80" for BRIGHTNESS

J8 Turn screen VR until the raster appears with any one of three (R, G, B) colors

# Conditions

Signal : Turn off the R, G, B (sync signal only)

Adjust Menu : 7) Special Adjust

Sub Menu : 1: 9300K COLOR Adjust

If Red appears in J8

J9 Set Value to "00" for < R, Low Light 9300K >

J10 Turn Screen-VR until the raster appears with any one of two (G or B) colors.

If Green appears in J10

J11 Set Value to "00" for < G, Low Light 9300K >

J12 Adjust Screen-VR to "0.46" cd/m<sup>2</sup> for Blue raster

J13 Adjust < R, Low Light 9300K > < G, Low Light 9300K > to [ x=0.281 y=0.311 ]

If Blue appears in J10

J11 Set Value to "00" for < B, Low Light 9300K >

J12 Adjust Screen-VR to "0.46" cd/m<sup>2</sup> for Green raster

J13 Adjust < R, Low Light 9300K > < G, Low Light 9300K > to [ x=0.281 y=0.311 ]

If Green appears in J8

J9 Set Value to "00" for < G, Low Light 9300K >

J10 Turn Screen-VR until the raster appears with any one of two (R or B) colors.

If Red appears in J10

J11 Set Value to "00" for < R, Low Light 9300K >

J12 Adjust Screen-VR to "0.46" cd/m<sup>2</sup> for Blue raster

J13 Adjust < R, Low Light 9300K > < G, Low Light 9300K > to [ x=0.281 y=0.311 ]

If Blue appears in J10

J11 Set Value to "00" for < B, Low Light 9300K >

J12 Adjust Screen-VR to "0.46" cd/m<sup>2</sup> for Red raster

J13 Adjust < R, Low Light 9300K > < G, Low Light 9300K > to [ x=0.281 y=0.311 ]

If Blue appears in J8

J9 Set Value to "00" for < B, Low Light 9300K >

J10 Turn Screen-VR until the raster appears with any one of two (R or G) colors.

If Red appears in J10

J11 Set Value to "00" for < R, Low Light 9300K >

J12 Adjust Screen-VR to "0.46" cd/m<sup>2</sup> for Green raster

J13 Adjust < R, Low Light 9300K > < B, Low Light 9300K > to [ x=0.281 y=0.311 ]

If Green appears in J10

J11 Set Value to "00" for < G, Low Light 9300K >

J12 Adjust Screen-VR to "0.46" cd/m<sup>2</sup> for Red raster

J13 Adjust < G, Low Light 9300K > < B, Low Light 9300K > to [ x=0.281 y=0.311 ]

J14 Test Pattern : 16 gradation grayscale Adjust Screen-VR so the 2nd level of gray appears slightly.

| Program Menu Item |                                                                                                                       | ◇ Test Meter<br>▼ Test Point<br>□ Pattern | JOB CODE | Input Signal | Operation                                                                                                                                                                                                                                                    | Adjusting Value |
|-------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| K                 | FOCUS                                                                                                                 | □ Character                               | K1       | Mode-1       | Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz].                                                                                                                                                                                  |                 |
|                   |                                                                                                                       |                                           | K2       |              | Make the corner sections of the screen optimum by turning D-FOCUS VR on the FBT.                                                                                                                                                                             |                 |
|                   |                                                                                                                       |                                           | K3       |              | Make the center section optimum by turning S-FOCUS VR on the FBT.                                                                                                                                                                                            |                 |
|                   |                                                                                                                       |                                           | K4       |              | Repeat K2 and K3 to make it optimum.                                                                                                                                                                                                                         |                 |
| L                 | FINAL TUNE<br>7) Special ADJUST                                                                                       |                                           | L1       |              | Set the cell to the program menu item at left and press                                                                                                                                                                                                      |                 |
|                   |                                                                                                                       |                                           | L2       |              | Select the 9:FINAL TUNE from the program menu item.<br>(Step 1):Data tuning.<br>These messages will appear :<br><loading EEPROM data> ...end<br><tuning EEPROM data> ... end<br><saving data to EEPROM> ... end<br><RECALL data - PRESET data> wait a moment |                 |
|                   |                                                                                                                       |                                           | L3       |              | (Step 2):Erase user preset data.<br>Erase All ' user preset data OK ? ><br>Press  or  and , go to L4.                                                                                                                                                        |                 |
|                   |                                                                                                                       |                                           | L4       |              | (Step 3):Calculate color data.<br>COLOR 6550K data OK ? >, press  and                                                                                                                                                                                        |                 |
|                   |                                                                                                                       |                                           | L5       |              | USER COLOR data OK ? >, press  and                                                                                                                                                                                                                           |                 |
|                   |                                                                                                                       |                                           | L6       |              | ABL data OK ? >, press  and .                                                                                                                                                                                                                                |                 |
|                   |                                                                                                                       |                                           | L7       |              | finished . ( Hit return key )<br>Press , go to L8.                                                                                                                                                                                                           |                 |
|                   |                                                                                                                       |                                           | L8       |              | (Step 4):Set brightness data and flag.<br><SET FLAG><br>wait a moment ... end<br>tune end .<br>Hit return key !                                                                                                                                              |                 |
|                   |                                                                                                                       |                                           | LE       |              | Press , return to menu of L2.<br>Press  and , to return to the main menu.                                                                                                                                                                                    |                 |
|                   |                                                                                                                       |                                           | M        |              | DATA SAVING<br>6) Save data to file                                                                                                                                                                                                                          |                 |
| M2                | Key in the file name after [ ] :.<br><br>Use serial number as a file name<br>( EXAMPLE : FF5110001 = "F5110001.DAT" ) |                                           |          |              |                                                                                                                                                                                                                                                              |                 |

## SCHEMATIC DIAGRAM

### IMPORTANT SAFETY NOTICE

The component identified by shading or international symbol  on the following schematic diagrams incorporate special features important for protection from X-Radiation, fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for those critical components.

#### NOTES :

##### 1. RESISTOR

All resistors are carbon 1/4W resistor, unless otherwise noted by the following marks.  
Unit of resistance is ohm ( $\Omega$ ), (K = 1,000, M = 1,000,000)

|                                                                                                             |                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  : Non Flammable           |  : Solid                                |
|  : Metal Oxide             |  : Metal (Precision and high stability) |
|  : Wire Wound              |  : Thermistor                           |
|  : Fusible                 |  : Positive coefficient Thermistor      |
|  : Flame Proof Rectangular |                                                                                                                          |

##### 2. CAPACITOR

All capacitors are ceramic 50V capacitor, unless otherwise noted by the following marks.  
Unit of capacitance is  $\mu F$ , unless otherwise noted.

|                                                                                                                |                                                                                                           |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  : Electrolytic              |  : Polyester           |
|  : Tantalum                 |  : Metalized Polyester |
|  : Bipolar                  |  : Polypropylene       |
|  : Polystyrene              |  : Mica                |
|  : Temperature Compensation |  : Ceramic             |
|                                                                                                                |  : Ceramic (SL)        |

##### 3. COIL

Unit of inductance is  $\mu H$ , unless otherwise noted.

##### 4. VOLTAGE MEASUREMENT

Voltage is measured by a digital meter receiving normal signal.

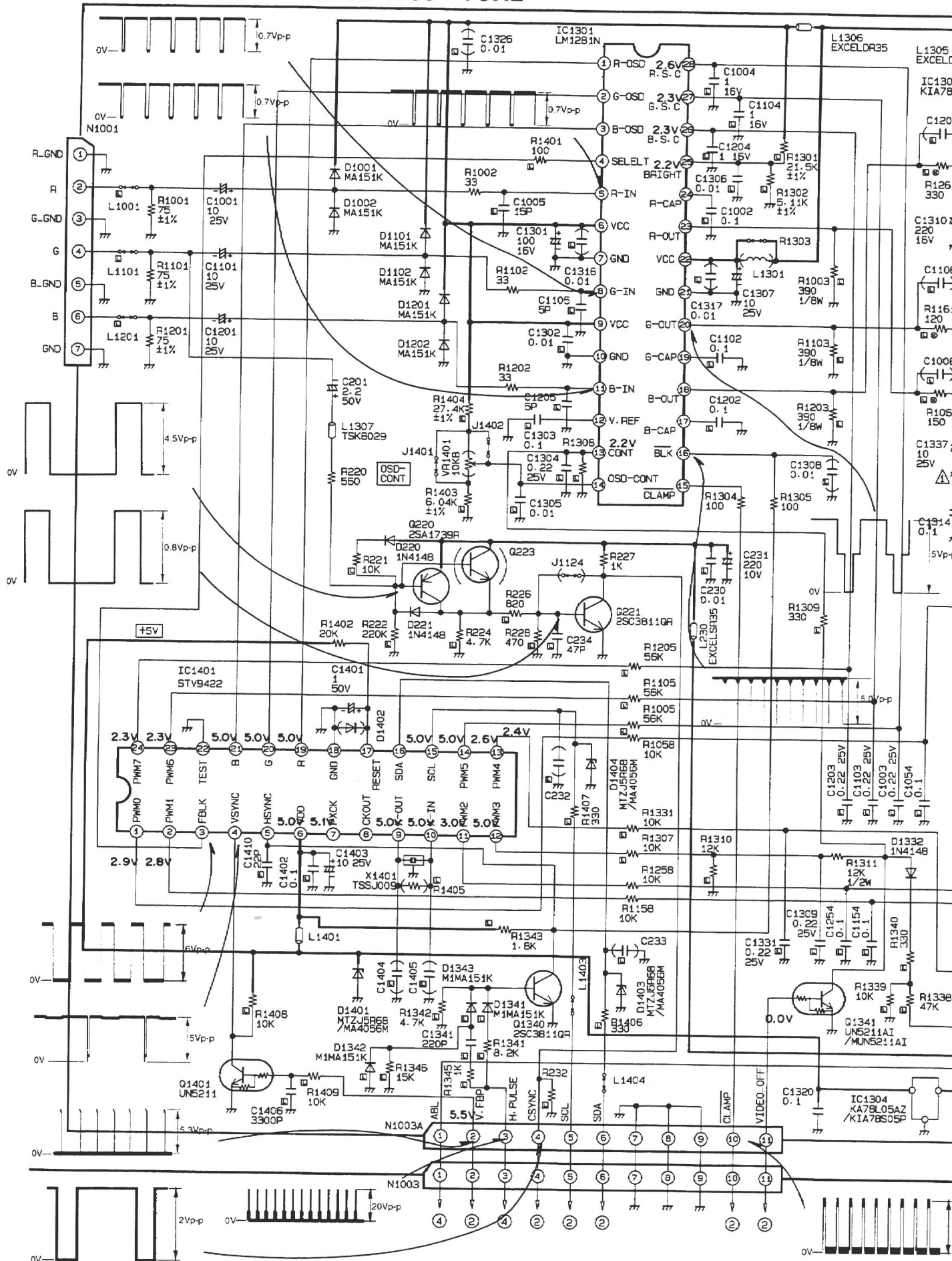
5. This schematic diagram is the latest at the time of printing and is subject to change without notice.

#### SERVICE NOTES :

This model has a section that does not share a common ground with the power supply section. The different sections are referred to as the HOT section and the COLD section in the precautions below.

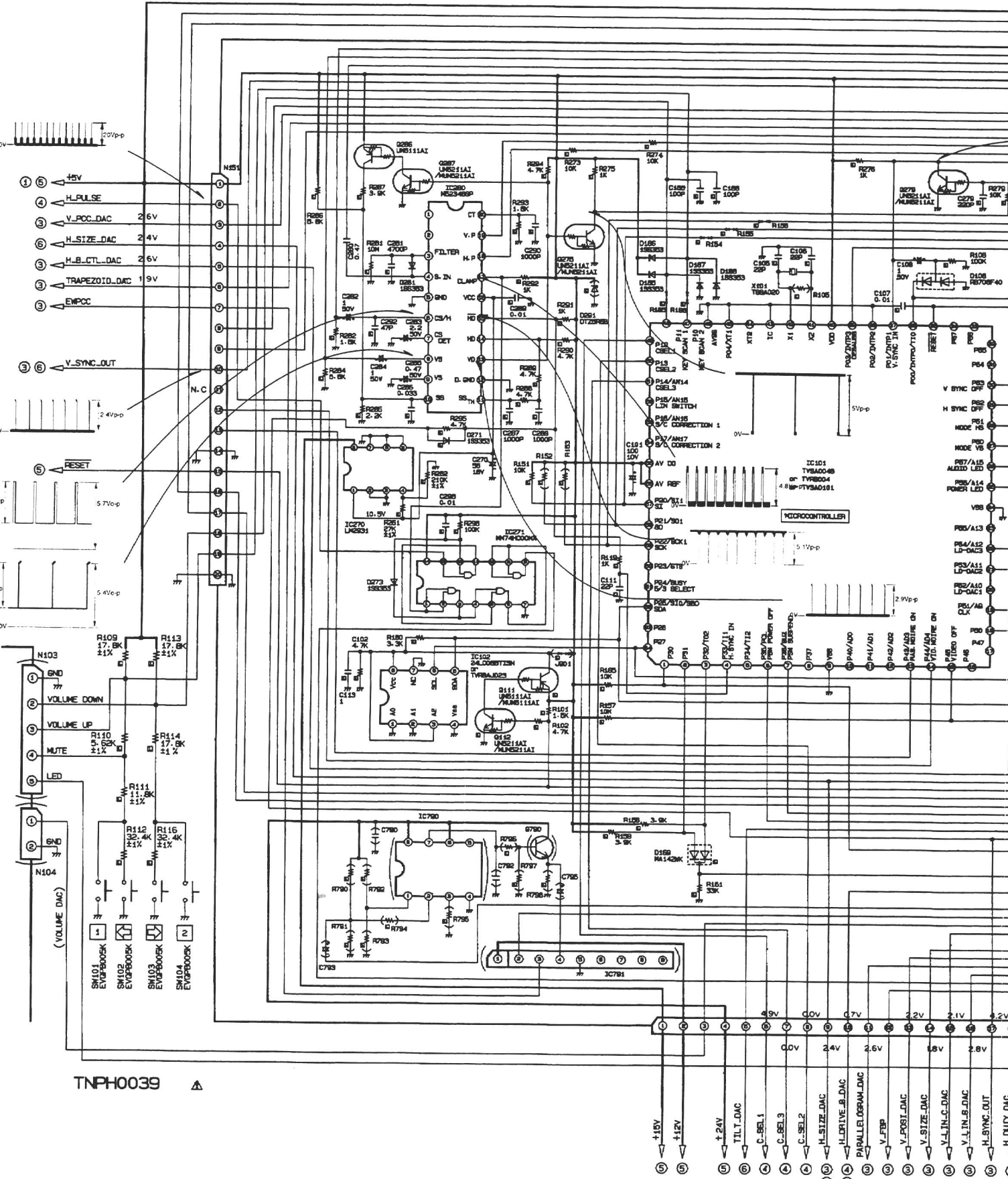
1. Do not touch the HOT section and the COLD section at the same time. You may receive an electric shock.
2. Do not short the HOT section to the COLD section. This could blow the fuse or damage parts.
3. Never measure the HOT section and the COLD section at the same time when using tools such as oscilloscopes or multimeters.
4. Always unplug the unit before beginning any operation such as removing the chassis.

# ★INPUT SIGNAL 1024×768 75Hz



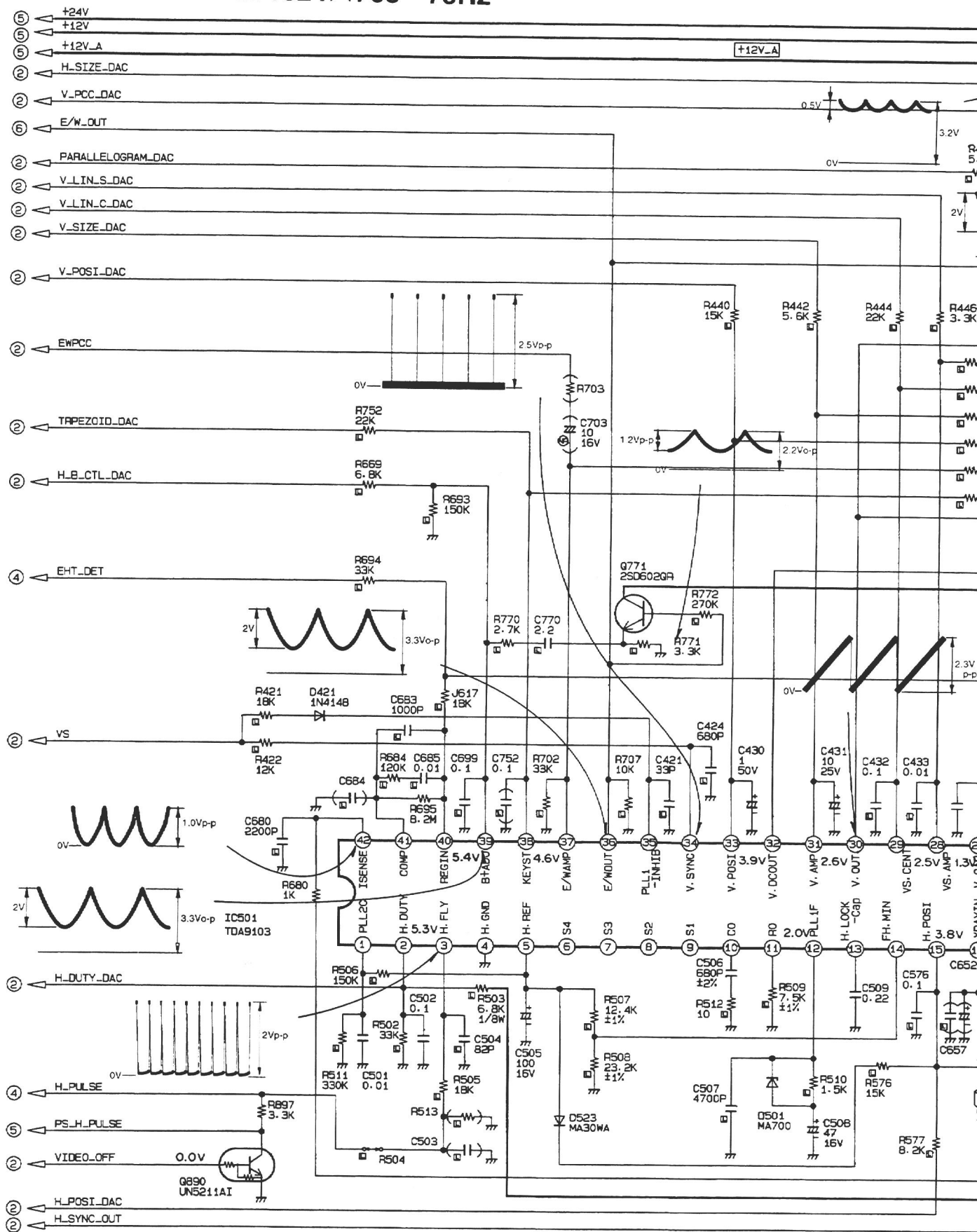


**\*INPUT SIGNAL 1024×768 75Hz**



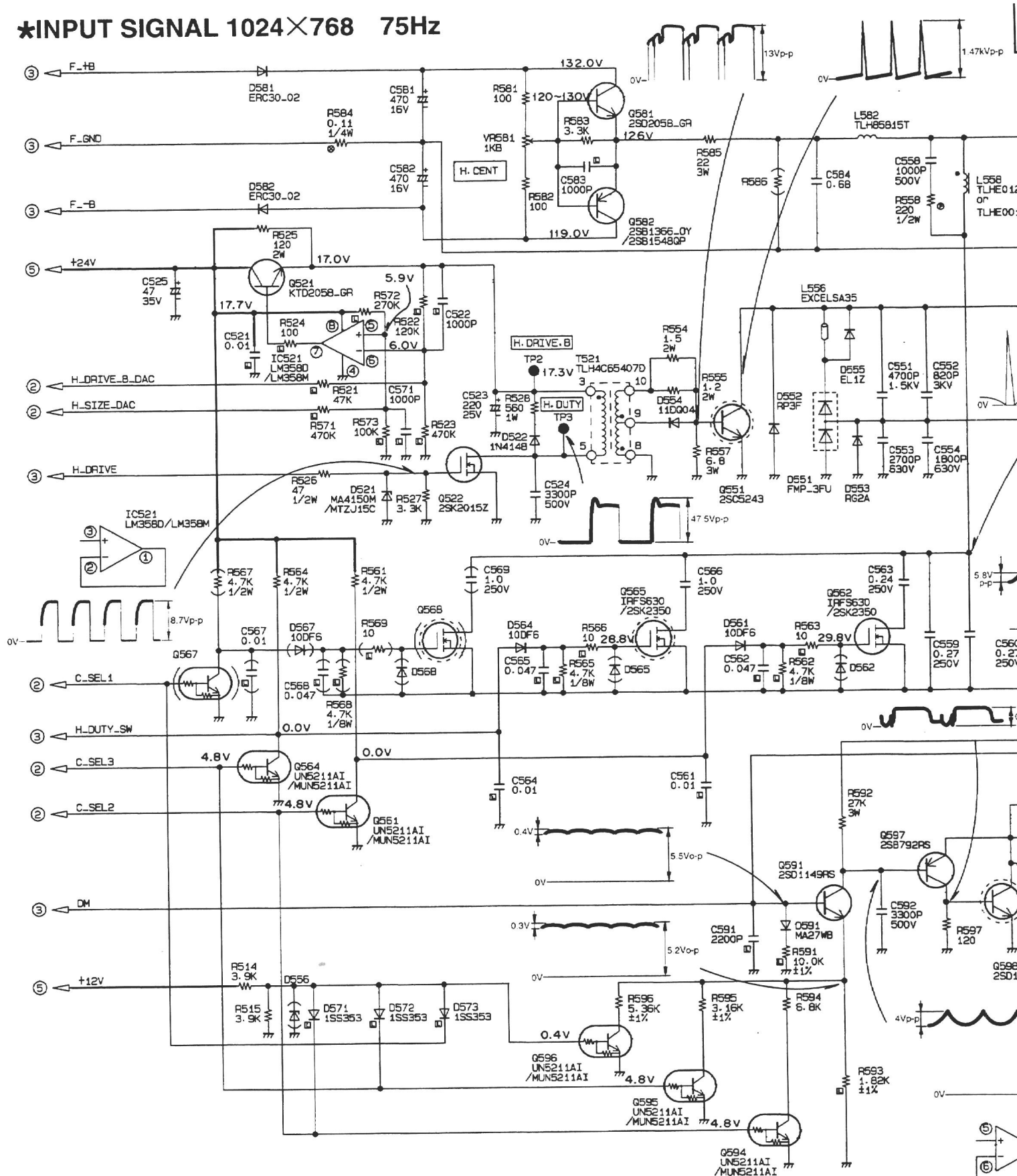


# \*INPUT SIGNAL 1024×768 75Hz

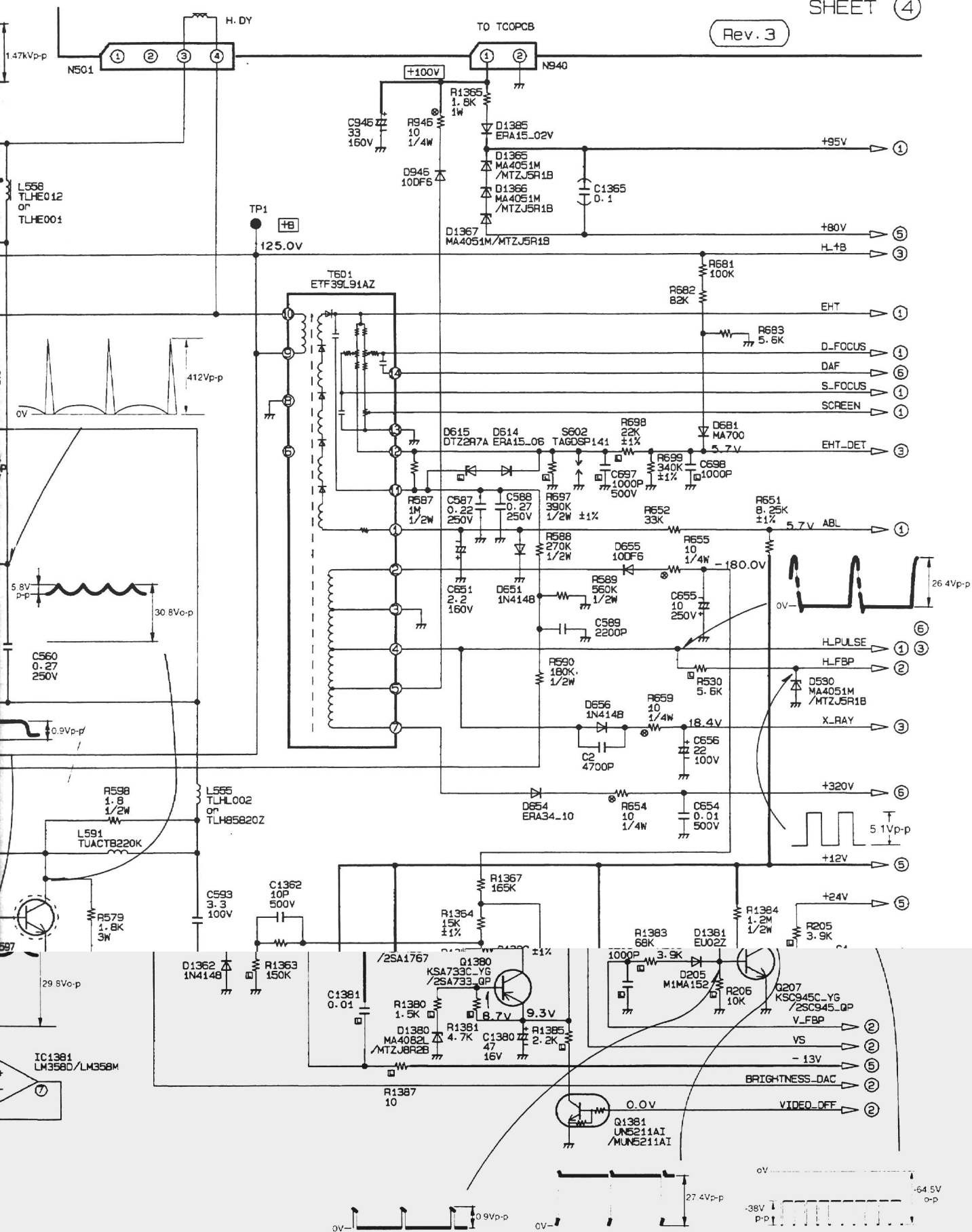




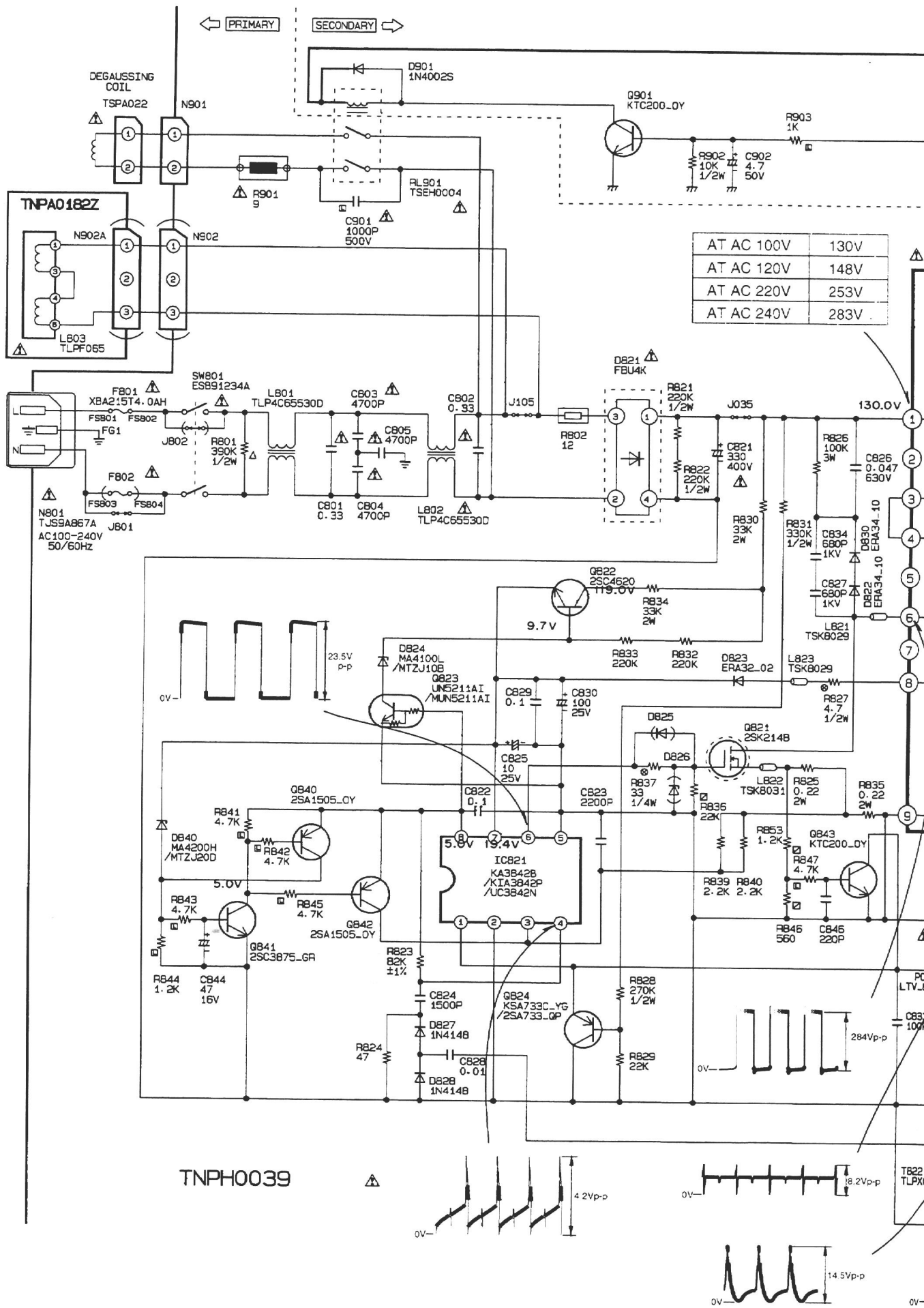
**\*INPUT SIGNAL 1024×768 75Hz**



TNPH0039



**\*INPUT SIGNAL 1024×768 75Hz**





**\*INPUT SIGNAL 1024×768 75Hz**

